

REPORT 60



**SWEED
SWEEP**
SOIL AND WATER
ENVIRONMENTAL
ENHANCEMENT PROGRAM



PAMPA
PROGRAMME D'AMELIORATION
DU MILIEU PEDOLOGIQUE
ET AQUATIQUE

Canada

Ontario

SWEEP

is a \$30 million federal-provincial agreement, announced May 8, 1986, designed to improve soil and water quality in southwestern Ontario over the next five years.

PURPOSES

There are two interrelated purposes to the program; first, to reduce phosphorus loadings in the Lake Erie basin from cropland run-off; and second, to improve the productivity of southwestern Ontario agriculture by reducing or arresting soil erosion that contributes to water pollution.

BACKGROUND

The Canada-U.S. Great Lakes Water Quality Agreement called for phosphorus reductions in the Lake Erie basin of 2000 tonnes per year. SWEEP is part of the Canadian agreement, calling for reductions of 300 tonnes per year — 200 from croplands and 100 from industrial and municipal sources.



PAMPA

est une entente fédérale-provinciale de 30 millions de dollars, annoncée le 8 mai 1986, et destinée à améliorer la qualité du sol et de l'eau dans le Sud-ouest de l'Ontario.

SES BUTS

Les deux buts de PAMPA sont: en premier lieu de réduire de 200 tonnes par an d'ici 1990 le déversement dans le lac Erie de phosphore provenant des terres agricoles, et de maintenir ou d'accroître la productivité agricole du Sud-ouest de l'Ontario, en réduisant ou en empêchant l'érosion et la dégradation du sol.

SES GRANDES LIGNES

L'entente entre le Canada et les États-Unis sur la qualité de l'eau des Grands Lacs prévoyait de réduire de 2 000 tonnes par an la pollution due au phosphore dans le bassin du lac Erie. PAMPA fait partie de cette entente qui réduira cette pollution de 300 tonnes par an — 200 tonnes provenant des terres agricoles et 100 tonnes provenant de sources industrielles et municipales.

TECHNOLOGY EVALUATION AND DEVELOPMENT SUB-PROGRAM

APPENDIX
THE EFFECT OF CONSERVATION TILLAGE
PRACTICES ON THE LOSSES OF PHOSPHORUS
AND HERBICIDES IN SURFACE AND SUBSURFACE
DRAINAGE WATERS

FINAL REPORT

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Prepared by: J. Gaynor and D. Bissonnette
for,
SOUTHWESTERN ONTARIO AGRICULTURAL RESEARCH
CORPORATION (SWOARC)
Harrow, Ontario

Under the Direction of: ECOLOGICAL SERVICES FOR PLANNING LIMITED,
Guelph, Ontario - Subprogram Manager For TED

On Behalf of: AGRICULTURE CANADA
RESEARCH STATION,
HARROW, ONTARIO N0R 1G0

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PART A



Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1998 - 1

Julian Time/88	Event #	Source	Rep	Taken	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
17.40	1	Surface	1	1	2	0.1980	0.2423	0.162	0.162	11475.9
19.00	1	Surface	1	0	1	0.2866	0.161	0.161	0.161	4913.6
32.56	2	Surface	1	-1	0	0.2423	0.2423	0.161	0.161	1971.9
48.00	3	Surface	1	0	0	0.2423	0.2423	0.161	0.161	10732.3
50.00	4	Surface	1	0	0	0.2423	0.2423	0.161	0.161	0.0
275.00	5	Surface	1	0	1	0.1584	0.1992	0.775	0.913	2424.5
291.96	6	Surface	1	-1	1	0.2628	0.943	0.943		
292.06	6	Surface	1	-1	1	0.1926	0.991	0.991		
292.08	6	Surface	1	-1	1	0.1828	0.942	0.942		
292.10	6	Surface	1	-1	0	0	0.2395	0.1604	0.476	0.800
297.00	7	Surface	1	0	2	0.1368	0.735	0.735		
310.00	8	Surface	1	-1	1	0.1841	0.790	1.000		
310.46	8	Surface	1	-1	1	0.1420	0.1702	0.2748	0.734	614.2
310.56	8	Surface	1	-1	1	0.0994	0.2196	0.2196	0.960	1777.9
310.65	8	Surface	1	-1	1	0.1368	0.1702	0.1832	0.751	
310.83	8	Surface	1	-1	1	0.2748	0.2746	0.2231	0.726	2877.0
312.00	9	Surface	1	-1	1	0.2690	0.3260	0.3260	0.742	1390.0
315.20	10	Surface	1	-1	1	0.1832	0.4167	0.4167	0.790	4525.7
315.25	10	Surface	1	-1	1	0.2262	0.3468	0.8050	0.8050	
318.19	11	Surface	1	-1	1	0.2231	0.8132	0.8132	0.434	
321.57	12	Surface	1	-1	1	0.3260	0.2806	0.2806	1.000	
321.61	12	Surface	1	-1	1	0.1832	0.3468	0.8050	0.8050	
325.61	13	Surface	1	-1	1	0.2262	0.8132	0.8132	0.434	
325.65	13	Surface	1	-1	1	0.3260	0.2806	0.2806	1.000	
325.81	13	Surface	1	-1	1	0.1832	0.3468	0.8050	0.8050	
325.85	13	Surface	1	-1	1	0.2262	0.8132	0.8132	0.434	
363.38	14	Surface	1	-1	1	0.3260	0.2806	0.2806	1.000	
17.40	1	Tile	1	0	0	0.2151	0.2965	0.2965	0.217	1329.0
32.56	2	Tile	2	0	0	0.2151	0.0087	0.0087	0.143	1735.0
72.66	3	Tile	3	0	0	0.0144	0.0026	0.0026	0.145	8651.0
84.39	4	Tile	4	0	0	0.0090	0.1593	0.1593	0.818	3034.0
84.66	4	Tile	4	0	0	0.0090	0.1593	0.1593	0.818	
85.42	4	Tile	4	0	0	0.0090	0.1593	0.1593	0.818	
94.88	5	Tile	5	0	0	0.0090	0.1593	0.1593	0.818	

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume Uplot
97.92	6	Tile	1	1	1	0.1380	0.1380	0.845	0.845	7232.0
114.31	7	Tile	1	0	0	0.0831	0.0831	0.321	0.321	39.0
136.85	8	Tile	1	0	0	0.3582	0.3582	1.031	1.031	48.0
154.27	9	Tile	1	1	1	0.0070	0.0070	0.086	0.086	117.0
192.96	10	Tile	1	1	1	0.0072	0.0072	0.136	0.136	270.0
267.10	11	Tile	1	1	1	0.1778	0.1778	0.465	0.465	151.0
267.13	11	Tile	1	0	0	0.0751	0.0576	0.345	0.290	2690.0
267.38	11	Tile	1	0	1	0.0656	0.0656	0.305	0.305	
276.41	12	Tile	1	1	1	0.0711	0.0711	0.305	0.305	
276.43	12	Tile	1	1	1	0.0187	0.0187	0.203	0.203	
276.44	12	Tile	1	1	1	0.1760	0.0698	0.611	0.759	143223.0
276.60	12	Tile	1	0	1	0.1424	0.1424	0.606	0.606	
277.44	12	Tile	1	1	1	0.1078	0.1078	0.745	0.745	
291.92	13	Tile	1	1	1	0.0799	0.0799	0.916	0.916	
291.96	13	Tile	1	1	1	0.0278	0.0278	1.000	1.000	
292.10	13	Tile	1	1	1	0.0048	0.0048	0.675	0.675	
292.15	13	Tile	1	1	1	0.0799	0.0604	0.495	0.565	4590.0
292.38	13	Tile	1	1	1	0.0409	0.0409	0.635	0.635	
292.67	13	Tile	1	1	1	0.0708	0.0838	0.535	0.757	18406.0
297.74	14	Tile	1	1	1	0.1057	0.1057	1.000	1.000	
297.77	14	Tile	1	1	1	0.1024	0.1362	0.891	0.891	
310.38	15	Tile	1	1	1	0.0765	0.0486	0.720	0.720	
310.44	15	Tile	1	1	1	0.0464	0.0464	0.465	0.465	
310.56	15	Tile	1	1	1	0.2205	0.2205	0.586	0.586	6282.0
310.65	15	Tile	1	1	1	0.2331	0.2331	0.579	0.579	
310.83	15	Tile	1	1	1	0.1921	0.1921	0.546	0.546	
311.33	15	Tile	1	1	1	0.1103	0.1103	0.529	0.529	
312.40	15	Tile	1	1	1	0.1024	0.1024	0.290	0.290	9131.0
315.20	16	Tile	1	1	1	0.3076	0.3076	0.541	0.541	5646.0
315.24	16	Tile	1	1	1					
315.28	16	Tile	1	1	1					
315.46	16	Tile	1	1	1					
318.19	17	Tile	1	1	1					
321.58	18	Tile	1	1	1					

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1888

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
325.63	19	Tile	1	1	1	0.2143	0.1572	0.350	0.379	8789.0
325.83	19	Tile	1	1	1	0.1852	0.0723	0.331	0.455	12226.0
326.40	19	Tile	1	1	1	0.0128	0.0730	0.354	0.698	12226.0
359.68	20	Tile	1	1	1	0.0546	0.1516	0.852	0.889	17100.6
362.46	20	Tile	1	1	1	0.2588	0.1958	0.225	0.403	17100.6
363.38	20	Surface	2	1	1	0.1329	0.580	0.580	0.0	0.0
17.40	1	Surface	2	2	0	0	0.2461	0.2461	0.265	4784.3
19.00	1	Surface	2	2	0	0	0.5621	0.5621	2.836	12704.2
32.56	2	Surface	2	2	0	0	0.5119	0.5119	1.830	517.2
48.00	3	Surface	2	2	0	0	0.4164	0.3003	0.298	4558.0
50.00	4	Surface	2	2	0	0	0.2638	0.2638	0.916	0.0
275.00	5	Surface	2	2	0	0	0.1794	0.1794	0.904	0.0
291.96	6	Surface	2	2	0	0	0.3415	0.3003	0.770	517.2
292.06	6	Surface	2	2	0	0	0.3415	0.3003	0.770	4040.6
292.08	6	Surface	2	2	0	0	0.1946	0.1628	0.745	0.0
292.10	6	Surface	2	2	0	0	0.1946	0.1628	0.745	0.0
297.00	7	Surface	2	2	0	0	0.2130	0.1649	0.715	0.0
310.00	8	Surface	2	2	0	0	0.1946	0.1649	0.715	0.0
310.46	8	Surface	2	2	0	0	0.1946	0.1649	0.715	0.0
310.56	8	Surface	2	2	0	0	0.1946	0.1649	0.715	0.0
310.65	8	Surface	2	2	0	0	0.1946	0.1649	0.715	0.0
310.83	8	Surface	2	2	0	0	0.1946	0.1649	0.715	0.0
312.00	9	Surface	2	2	0	0	0.2849	0.2849	0.304	678.9
315.20	10	Surface	2	2	0	0	0.3173	0.2903	0.895	1467.0
315.25	10	Surface	2	2	0	0	0.2633	0.2633	0.606	3652.9
318.19	11	Surface	2	2	0	0	0.1542	0.1542	0.802	2230.5
321.57	12	Surface	2	2	0	0	0.3358	0.3877	0.710	0.697
321.61	12	Surface	2	2	0	0	0.4395	0.2401	0.355	5398.5
325.61	13	Surface	2	2	0	0	0.1630	0.2806	0.800	0.060
325.65	13	Surface	2	2	0	0	0.3189	0.3189	0.632	0.060
325.81	13	Surface	2	2	0	0	0.1980	0.0736	1.000	0.756
363.38	14	Surface	2	2	0	0	0.0736	0.0262	0.060	42024
17.40	1	Tile	2	2	0	0	0.0262	0.0262	0.060	3420

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage. - 4

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
32.56	2	Tl9	2	0	0	0.0262	0.0262	0.060	0.060	285.0
72.66	3	Tl9	2	0	0	0.0448	0.0448	0.176	0.176	1533.0
84.39	4	Tl9	2	1	1	0.0287	0.0324	0.065	0.099	8656.0
84.66	4	Tl9	2	1	1	0.0236		0.055		
85.42	4	Tl9	2	1	1	0.0448		0.176		
94.88	5	Tl9	2	0	0	0.0037		0.142		
97.92	6	Tl9	2	1	1	0.0968		0.115		
114.31	7	Tl9	2	0	0	0.0797		0.336		
136.85	8	Tl9	2	2	0	0.0540		0.319		
154.27	9	Tl9	2	2	1	0.0037		0.142		
192.96	10	Tl9	2	2	1	0.0182		0.185		
267.10	11	Tl9	2	0	0	0.0797		0.336		
267.13	11	Tl9	2	2	2	0.0797		0.336		
267.38	11	Tl9	2	2	2	0.0896	0.0539	0.345	0.320	4273.0
276.41	12	Tl9	2	2	2	0.0796		0.315		
276.43	12	Tl9	2	2	2	0.0743		0.364		
276.44	12	Tl9	2	2	2	0.0250		0.290		
276.60	12	Tl9	2	2	2	0.0012		0.265		
277.44	12	Tl9	2	2	2	0.2460	0.1045	0.395	0.598	11545.0
291.92	13	Tl9	2	2	2	0.1776		0.625		
291.96	13	Tl9	2	2	2	0.1127		0.500		
292.10	13	Tl9	2	2	2	0.0753		0.702		
292.15	13	Tl9	2	2	2	0.0150		0.495		
292.38	13	Tl9	2	2	2	0.0004		0.856		
292.67	13	Tl9	2	2	2	0.0610	0.0605	0.595	0.580	7719.0
297.74	14	Tl9	2	2	2	0.0600		0.565		
297.77	14	Tl9	2	2	2	0.0604	0.2373	0.545	0.709	8563.0
310.38	15	Tl9	2	2	2	1.0350		0.581		
310.44	15	Tl9	2	2	2	0.1407		0.845		
310.56	15	Tl9	2	2	2	0.2248		1.000		
310.65	15	Tl9	2	2	2	0.1100		1.000		
311.33	15	Tl9	2	2	2	0.0424		0.465		
312.40	15	Tl9	2	2	2	0.0475		0.525		

Appendix 1A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
315.20	16	Tile	2	1	1	0.1809	0.1799	0.871	0.626	3671.0
315.24	16	Tile	2	1	1	0.2180	0.606			
315.28	16	Tile	2	1	1	0.2176	0.595			
315.46	16	Tile	2	1	1	0.1031	0.430			
318.19	17	Tile	2	1	1	0.0958	0.784	0.784	0.784	6547.0
321.58	18	Tile	2	1	1	0.3916	0.3816	0.512	0.512	3947.0
325.63	19	Tile	2	1	1	0.1460	0.1205	0.506	0.479	6419.0
325.83	19	Tile	2	1	1	0.1707		0.585		
326.40	19	Tile	2	1	1	0.0448	0.345			
359.68	20	Tile	2	1	1	0.0554	0.1256	0.470	0.814	8554.0
362.46	20	Tile	2	1	1	0.0879		0.971		
363.38	20	Tile	2	1	1	0.2332	1.000			

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1998 . 1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
17.40	1	Surface	1	1	1	0.2562	0.2434	0.145	0.125	8889.7	
19.00	1	Surface	1	0	3	0.2306		0.105			
32.56	2	Surface	1	1	0	0.2434	0.2434	0.105	0.105	2909.4	
48.00	3	Surface	1	0	0	0.2434	0.2434	0.105	0.105	2327.5	
50.00	4	Surface	1	0	0	0.2434	0.2434	0.105	0.105	14837.8	
275.00	5	Surface	1	0	2	0.9968	0.9968	0.323	0.323	0.0	
291.96	6	Surface	1	0	2	0.2936	0.3585	0.365	0.801	4655.0	
292.06	6	Surface	1	1	1	0.4508		0.902			
292.08	6	Surface	1	1	1	0.3586		0.956			
292.10	6	Surface	1	1	1	0.3310		0.981			
297.00	7	Surface	1	0	0	0	0.2492	0.1344	0.671	0.726	2780.1
310.00	8	Surface	1	0	0	2					
310.46	8	Surface	1	1	1	0.0418		0.395			
310.56	8	Surface	1	1	1	0.1470		0.985			
310.65	8	Surface	1	1	1	0.1121		0.802			
310.83	8	Surface	1	1	1	0.1221		0.775			
312.00	9	Surface	1	0	0	1.0496	1.0496	0.430	0.430	323.3	
315.20	10	Surface	1	1	3	0.4218	0.3169	0.609	0.662	1260.7	
315.25	10	Surface	1	1	1	0.2120		0.715			
318.19	11	Surface	1	1	1	0.1440	0.1440	0.586	0.586	2850.8	
321.57	12	Surface	1	1	1	1.3158	1.0493	0.406	0.430	743.5	
321.61	12	Surface	1	1	1	0.7828		0.453			
325.61	13	Surface	1	1	1	0.4138	0.4379	0.351	0.452	4428.7	
325.65	13	Surface	1	1	3	0.6108		0.388			
325.81	13	Surface	1	1	1	0.2653		0.862			
325.85	13	Surface	1	0	1	0.4417		0.205			
363.39	14	Surface	1	1	1	0.2438	0.2438	0.572	0.572	1519.3	
17.40	1	Tie	1	0	0	0.4989	0.4989	0.326	0.326	498.0	

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988 -2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
32.56	2	Tile	1	1	0	0.3555	0.2555	0.895	0.895	2363.0
72.66	3	Tile	1	1	0	0.2637	0.2637	0.080	0.080	1967.0
84.39	4	Tile	1	1	1	0.0278	0.0266	0.010	0.056	8725.0
84.66	4	Tile	1	1	1	0.0260	0.0260	0.043		
85.42	4	Tile	1	1	0	0.2870	0.2870	0.293	0.293	2898.0
94.88	5	Tile	1	1	1	0.2017	0.2017	0.210	0.210	6755.0
97.92	6	Tile	1	1	0	0.0970	0.0970	0.330	0.330	156.0
114.31	7	Tile	1	1	0	0.3155	0.3155	0.517	0.517	62.0
136.85	8	Tile	1	0	0	0.0014	0.0014	0.150	0.150	479.0
154.27	9	Tile	1	1	1	0.0096	0.0096	0.135	0.135	36.0
192.96	10	Tile	1	1	0	0.0783	0.0783	0.216	0.216	161.0
266.94	11	Tile	1	1	0	0.1026	0.1026			
267.10	11	Tile	1	1	0	0.0540	0.0540	0.216	0.216	
267.13	11	Tile	1	1	0	0.0937	0.0937	0.400	0.400	
267.38	11	Tile	1	1	1	0.0687	0.0687	0.272	0.272	2104.0
276.41	12	Tile	1	1	1	0.0761	0.0761	0.212	0.212	
276.43	12	Tile	1	1	1	0.0800	0.0800	0.215	0.215	
276.44	12	Tile	1	1	1	0.0249	0.0249	0.259	0.259	
276.60	12	Tile	1	1	1	0.0253	0.0253	0.1201	0.1201	
291.92	13	Tile	1	1	1	0.1777	0.1777	0.701	0.701	
291.96	13	Tile	1	1	1	0.1521	0.1521	0.149	0.149	
292.10	13	Tile	1	1	1	0.0898	0.0898	0.180	0.180	
292.15	13	Tile	1	1	1	0.0371	0.0371	1.000	1.000	
292.38	13	Tile	1	1	1	0.0105	0.0105	0.735	0.735	
292.67	13	Tile	1	1	1	0.0963	0.0963	0.250	0.250	750.0
297.74	14	Tile	1	1	1	0.0642	0.0642	0.541	0.541	
297.77	14	Tile	1	1	1	0.0323	0.0323	0.202	0.202	1776.0
310.38	15	Tile	1	1	1					

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
310.44	15	Tile	1	1	1	0.0625	0.0625	0.285	0.285	-3
310.56	15	Tile	1	1	1	0.0989	0.0989	0.515	0.515	
310.65	15	Tile	1	1	1	0.0739	0.0739	0.435	0.435	
310.83	15	Tile	1	1	1	0.0860	0.0860	0.262	0.262	
311.33	15	Tile	1	1	1	0.0217	0.0217	0.260	0.260	
312.40	15	Tile	1	1	1	0.0160	0.0160	0.291	0.291	
315.20	16	Tile	1	1	1	0.3849	0.2897	0.421	0.421	
315.24	16	Tile	1	1	1	0.3463	0.3463	0.375	0.375	
315.28	16	Tile	1	1	1	0.3224	0.3224	0.588	0.588	
315.46	16	Tile	1	1	1	0.1051	0.1051	0.581	0.581	
318.19	17	Tile	1	1	1	0.2153	0.2153	0.190	0.190	
321.58	18	Tile	1	1	1	0.8776	0.8776	0.435	0.435	
325.63	19	Tile	1	1	1	0.3650	0.2696	0.461	0.461	
325.63	19	Tile	1	1	1	0.3090	0.3090	0.460	0.460	
326.40	19	Tile	1	1	1	0.1328	0.1328	0.560	0.560	
359.68	20	Tile	1	1	1	0.0584	0.0834	0.245	0.245	
362.46	20	Tile	1	1	1	0.0832	0.0832	1.000	1.000	
363.39	20	Tile	1	1	1	0.0985	0.0985	0.700	0.700	
17.40	1	Surface	2	2	1	0.0930	0.1221	0.355	0.355	
19.00	1	Surface	2	2	0	0.1511	0.1511	0.390	0.390	
32.56	2	Surface	2	2	1	0.3301	0.3301	0.690	0.690	
48.00	3	Surface	2	0	0	0.2461	0.2461	0.285	0.285	
50.00	4	Surface	2	0	0	0.5621	0.5621	2.836	2.836	
275.00	5	Surface	2	2	2	2.4096	2.4096	0.236	0.236	
291.96	6	Surface	2	3	0	0.3663	0.3709	0.289	0.289	
292.06	6	Surface	2	1	1	0.5822	0.971	0.971	0.971	
292.08	6	Surface	2	1	0	0.4120	0.4120	0.907	0.907	
292.10	6	Surface	2	1	1	0.1230	0.1230	0.950	0.950	

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
297.00	7	Surface	2	0	0	0.7786	0.7786	0.671	0.671	3820.5
310.00	8	Surface	2	0	2	0.1427	0.1442	0.290	0.777	6788.4
310.46	8	Surface	2	1	1	0.1789		0.906		
310.56	8	Surface	2	1	1	0.1960		0.870		
310.65	8	Surface	2	1	1	0.1080		1.000		
310.83	8	Surface	2	1	1	0.0956		0.820		
312.00	9	Surface	2	0	0	0.2849	0.2849	0.304	0.304	1099.1
315.20	10	Surface	2	1	1	0.2462	0.2868	0.605	0.516	1131.4
315.25	10	Surface	2	1	1	0.3274		0.426		
318.19	11	Surface	2	1	1	0.1628	0.1628	0.510	0.510	3588.2
321.57	12	Surface	2	1	1	1.0177	0.9561	0.496	0.423	6226.9
321.61	12	Surface	2	1	1	0.8944		0.350		
325.61	13	Surface	2	1	1	0.6976	0.5598	0.471	0.553	8113.9
325.65	13	Surface	2	1	1	0.5654		0.554		
325.81	13	Surface	2	1	1	0.6934	0.472			
325.85	13	Surface	2	0	0	0.2818		0.716		
363.38	14	Surface	2	1	1	0.1010		0.380		9160.7
17.40	1	Tile	2	0	0	0.1175	0.1175	0.050	0.050	565.0
32.56	2	Tile	2	1	0	0.1175	0.1175	0.050	0.050	1101.0
72.66	3	Tile	2	1	1	0.1381	0.1381	0.180	0.180	2169.0
84.39	4	Tile	2	1	1	0.1175	0.1278	0.050	0.115	8327.0
84.66	4	Tile	2	1	1	0.1381		0.180		
85.42	4	Tile	2	0	0	0.0082		0.182		2095.0
94.88	5	Tile	2	0	0	0.2271		0.306		4896.0
97.92	6	Tile	2	1	1	0.1659	0.1659	0.343	0.343	156.0
114.31	7	Tile	2	0	0	0.0916	0.0916	0.311	0.311	74.0
136.85	8	Tile	2	0	0	0.0066	0.0066	0.146	0.146	759.0
154.27	9	Tile	2	1	1					

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
192.96	10	Tile	2	1	1	0.0026	0.0026	0.149	0.149	305.0
266.94	11	Tile	2	1	0	0.1659	0.1659	0.344	0.344	2299.0
267.10	11	Tile	2	1	0	0.2485	0.2485			
267.13	11	Tile	2	0	0					
267.38	11	Tile	2	1	1	0.0833				
276.41	12	Tile	2	1	1	0.1337	0.0916	0.345	0.360	0.311
276.43	12	Tile	2	1	1	0.1110				
276.44	12	Tile	2	1	1	0.1163				
276.60	12	Tile	2	1	0					
277.44	12	Tile	2	1	1	0.0052				
291.92	13	Tile	2	2	1	0.2708	0.1332	0.888	0.772	11490.0
291.96	13	Tile	2	1	1	0.2105				
292.10	13	Tile	2	1	1	0.1441				
292.15	13	Tile	2	1	1	0.1073				
292.38	13	Tile	2	2	1	0.0427				
292.67	13	Tile	2	2	1	0.0236				
297.74	14	Tile	2	1	1	0.0682	0.0654	0.474	0.452	8170.0
297.77	14	Tile	2	2	1	0.0626				
310.38	15	Tile	2	1	1	0.0217	0.0778	0.175	0.462	10271.0
310.44	15	Tile	2	1	1	0.0675				
310.56	15	Tile	2	1	1	0.1715				
310.65	15	Tile	2	2	1	0.1400				
310.83	15	Tile	2	2	1	0.1131				
311.33	15	Tile	2	2	1	0.0169				
312.40	15	Tile	2	2	1	0.0139				
315.20	16	Tile	2	1	1	0.1656	0.2016	0.407	0.291	4516.0
315.24	16	Tile	2	1	1	0.2959				
315.28	16	Tile	2	1	1	0.2399				

Appendix 2A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
315.46	16	Tile	2	1	0	0.1051	0.1051	0.181	0.475	7974.0
318.19	17	Tile	2	1	1	0.1134	0.1134	0.475	0.475	4866.0
321.58	18	Tile	2	1	1	0.6167	0.6167	0.130	0.130	8299.0
325.63	19	Tile	2	1	1	0.2760	0.1956	0.560	0.378	
325.83	19	Tile	2	1	1	0.2551		0.255		
326.40	19	Tile	2	1	1	0.0558		0.320		
359.68	20	Tile	2	1	1	0.0730	0.1256	0.825	0.788	8176.0
362.46	20	Tile	2	1	1	0.0583		0.770		
363.38	20	Tile	2	1	1	0.2455		0.770		

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., g/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
17.40	1	Surface	1	1	0	0.8822	0.8822	0.243	0.243	4719.6
19.00	1	Surface	1	0	0	0.8822	0.8822	0.243	0.243	3200.3
32.56	2	Surface	1	1	0	0	0.8822	0.243	0.243	0.0
48.00	3	Surface	1	0	0	0	0.8824	0.243	0.243	7629.0
50.00	4	Surface	1	0	2	0	0.8824	0.243	0.243	0.0
275.00	5	Surface	1	0	0	0	0	0	0	0.0
291.96	6	Surface	1	0	0	0.8824	0.8824	0.243	0.243	258.6
292.06	6	Surface	1	1	0	0	0	0	0	0.0
292.08	6	Surface	1	1	0	0	0	0	0	0.0
292.10	6	Surface	1	1	0	0	0	0	0	0.0
297.00	7	Surface	1	0	0	0	0	0	0	0.0
310.46	8	Surface	1	0	0	0	0	0	0	0.0
310.56	8	Surface	1	1	1	0	0	0	0	0.0
310.65	8	Surface	1	1	1	0	0	0	0	0.0
310.83	8	Surface	1	1	1	0	0	0	0	0.0
312.00	9	Surface	1	0	0	0	0	0	0	0.0
315.20	10	Surface	1	0	0	0	0	0	0	0.0
315.25	10	Surface	1	0	0	0	0	0	0	0.0
318.19	11	Surface	1	0	0	0	0	0	0	0.0
321.57	12	Surface	1	0	0	0	0	0	0	0.0
321.61	12	Surface	1	0	0	0	0	0	0	0.0
325.65	13	Surface	1	0	0	0	0	0	0	0.0
325.81	13	Surface	1	1	1	0	0	0	0	0.0
325.85	13	Surface	1	0	0	0	0	0	0	0.0
363.38	14	Surface	1	1	0	0	0	0	0	0.0
17.40	1	Tile	1	0	0	0	0	0.0407	0.0407	662.0
32.56	2	Tile	1	1	1	0	0	0.0315	0.0315	1709.0
72.66	3	Tile	1	1	4	0	0	0.0408	0.0408	1967.0

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

Julian Time/88	Event #	Source	Rep #	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
84.39	4	Tile	1	1	1	0.0138	0.0324	0.046	0.097	11904.0
84.66	4	Tile	1	1	1	0.0492	0.215	0.031	0.085	2187.0
85.42	4	Tile	1	1	1	0.0341	0.0345	0.085	0.260	5829.0
94.88	5	Tile	1	0	0	0.0345	0.0857	0.285	0.285	104.0
97.92	6	Tile	1	1	1	0.1042	0.1042	0.265	0.265	74.0
114.31	7	Tile	1	0	0	0.1042	0.1042	0.265	0.265	855.0
136.85	8	Tile	1	0	0	0.0004	0.0004	0.140	0.115	59.0
154.27	9	Tile	1	1	1	0.0053	0.0053	0.115	0.115	0.0
192.96	10	Tile	1	1	0	0	0.1042	0.245	0.285	396.0
267.13	11	Tile	1	0	1	0.1574	0.1321	0.265	0.265	
276.41	12	Tile	1	1	1	0.1080	0.1080	0.285	0.285	
276.43	12	Tile	1	1	1	0.0193	0.0193	0.286	0.286	
276.44	12	Tile	1	1	1	0.4950	0.1630	0.266	0.433	10803.0
276.60	12	Tile	1	1	1	0.2005	0.1342	0.252	0.440	
291.92	13	Tile	1	1	1	0.1238	0.0208	0.325	0.441	
291.96	13	Tile	1	1	1	0.0035	0.0035	0.874	0.360	6267.0
292.10	13	Tile	1	1	1	0.1062	0.0638	0.310	0.276	13888.0
292.15	13	Tile	1	1	1	0.0615	0.0615	0.410	0.212	
292.38	13	Tile	1	1	1	0.1822	0.1889	0.209	0.315	
292.67	13	Tile	1	1	1	0.2080	0.5507	0.2270	0.382	
297.74	14	Tile	1	1	1	0.0615	0.0615	0.212	0.222	
310.38	15	Tile	1	1	1	0.1822	0.1889	0.310	0.360	
310.44	15	Tile	1	1	1	0.2080	0.5507	0.2270	0.382	
310.56	15	Tile	1	1	1	0.0615	0.0615	0.212	0.222	
310.65	15	Tile	1	1	1	0.1822	0.1889	0.310	0.360	
310.83	15	Tile	1	1	1	0.2080	0.5507	0.2270	0.382	
311.33	15	Tile	1	1	1	0.0615	0.0615	0.212	0.222	

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
312.40	15	Tile	1	1	1	0.0109	0.290	0.280	0.354	8362.0
315.20	16	Tile	1	1	1	1.7600	0.8995	0.410	0.370	
315.24	16	Tile	1	1	1	0.1938				
315.28	16	Tile	1	1	1	1.4012				
315.46	16	Tile	1	1	1	0.2429				
316.19	17	Tile	1	1	1	0.9610	0.9610	0.440	0.440	17218.0
321.58	18	Tile	1	1	1	4.5152	4.5152	0.108	0.108	10156.0
325.63	19	Tile	1	1	1	2.5865	1.8861	0.621	0.521	19335.0
325.83	19	Tile	1	1	1	2.4310				
326.40	19	Tile	1	1	1	0.6409				
359.68	20	Tile	1	1	1	0.0958	0.0998	0.636	0.627	18810.0
362.46	20	Tile	1	1	1	0.0216				
363.38	20	Tile	1	1	1	0.1821				
17.40	1	Surface	2	1	0					
19.00	1	Surface	2	0	1	0.2957	0.2957	0.282	0.282	9697.9
32.56	2	Surface	2	1	0	0.6572	0.6572	0.396	0.396	4784.3
48.00	3	Surface	2	0	0	0.1735	0.1735	0.145	0.145	4687.3
50.00	4	Surface	2	0	0	1.6164	1.6164	0.883	0.883	9019.0
275.00	5	Surface	2	0	0	1.2305	1.2305	0.120	0.120	549.5
291.96	6	Surface	2	0	3	0.3782	0.3782	0.296	0.296	2812.4
292.06	6	Surface	2	1	0					
292.08	6	Surface	2	1	0					
292.10	6	Surface	2	1	0					
297.00	7	Surface	2	0	0					
310.46	8	Surface	2	0	0					
310.56	8	Surface	2	1	0					
310.65	8	Surface	2	1	0					
310.83	8	Surface	2	1	0					

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional -4 tillage, 1998

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
312.00	9	Surface	2	0	0	1.1232	0.8916	0.930	0.703	0.0
315.20	10	Surface	2	1	1	0.6600	0.475	0.246	0.246	7435.0
315.25	10	Surface	2	1	1	0.7707	0.7707	0.214	0.198	3135.7
318.19	11	Surface	2	1	1	1.7054	1.7727	0.182	0.182	3168.0
321.57	12	Surface	2	1	1	1.8400	1.4038	0.503	0.442	6562.2
321.61	12	Surface	2	1	1	1.7157	1.4996	0.230	0.230	
325.61	13	Surface	2	1	1	2.1110	2.0988	0.800	0.424	3620.5
325.65	13	Surface	2	1	1	1.3016	1.3016	0.132	0.132	347.0
325.81	13	Surface	2	0	0	0.5900	0.5900	0.132	0.132	359.0
325.85	13	Surface	2	1	0	0.5900	0.5900	0.0968	0.0968	781.0
363.38	14	Surface	2	1	0	0.0398	0.0398	0.070	0.070	8099.0
17.40	1	Tile	2	0	0	0.0781	0.0781	0.194	0.176	
32.56	2	Tile	2	1	0	0.0968	0.0968	0.285	0.285	
72.66	3	Tile	2	1	1	0.2486	0.2486	0.176	0.176	1515.0
84.39	4	Tile	2	2	1	0.1153	0.1153	0.181	0.181	3477.0
84.66	4	Tile	2	1	1	0.1153	0.1153	0.181	0.181	65.0
85.42	4	Tile	2	1	1	0.2216	0.2216	0.269	0.269	74.0
94.88	5	Tile	2	0	0	0.0011	0.0011	0.166	0.166	464.0
97.92	6	Tile	2	1	1	0.0751	0.0751	0.260	0.260	33.0
114.31	7	Tile	2	0	0	0.3220	0.3220	0.0	0.269	144.0
136.85	8	Tile	2	0	0	0.2075	0.2075	0.236	0.236	
154.27	9	Tile	2	1	1	0.2663	0.2663	0.250	0.250	
192.96	10	Tile	2	0	0	0.0907	0.0907	0.310	0.310	
267.13	11	Tile	2	0	0					
276.41	12	Tile	2	1	1					
276.43	12	Tile	2	1	1					
276.44	12	Tile	2	1	1					
276.60	12	Tile	2	2	2					

Appendix 3A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for conventional tillage, 1988

- 5

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
291.92	13	Tile	2	0	0	0.2302	0.1237	0.486	0.374	8411.0	
291.96	13	Tile	2	1	1	0.2040		0.140			
292.10	13	Tile	2	1	1	0.1283		0.115			
292.15	13	Tile	2	1	1	0.0508		0.306			
292.38	13	Tile	2	1	1	0.0053		0.825			
292.67	13	Tile	2	1	1	0.0792	0.0751	0.315	0.260	6466.0	
297.74	14	Tile	2	1	1	0.0710		0.205			
297.77	14	Tile	2	1	1	0.0030	0.1129	0.159	0.288	10634.0	
310.38	15	Tile	2	1	1	0.0691		0.170			
310.44	15	Tile	2	1	1	0.0954		0.315			
310.56	15	Tile	2	1	1	0.2892		0.400			
310.65	15	Tile	2	1	1	0.2898		0.280			
310.83	15	Tile	2	1	1	0.0165		0.290			
311.33	15	Tile	2	1	1	0.0474		0.282			
312.40	15	Tile	2	1	1	1.5662	1.4026	0.235	0.218	6103.0	
315.20	16	Tile	2	1	1	1.6109		0.214			
315.24	16	Tile	2	1	1	1.6716		0.254			
315.28	16	Tile	2	1	1	0.7616		0.170			
315.46	16	Tile	2	1	1	1.1268	1.1268	0.785	0.785	8574.0	
318.19	17	Tile	2	1	1	2.8556	2.8556	1.000	1.000	5487.0	
321.58	18	Tile	2	1	1	1.7848	1.6035	1.000	0.768	8460.0	
325.63	19	Tile	2	1	1	2.1589		1.000			
325.83	19	Tile	2	1	1	0.8668		0.305			
326.40	19	Tile	2	1	1	0.1061	0.1282	0.431	0.690	10163.0	
359.68	20	Tile	2	1	1	0.0467		0.610			
362.46	20	Tile	2	1	1	0.2297		1.000			
363.38	20	Tile	2	1	1						

Appendix 4A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
17.40	1	Surface	1	1	2	11475.9	27.80	18.53
32.56	2	Surface	1	1	0	4913.6	11.91	7.91
48.00	3	Surface	1	0	0	1971.9	4.78	3.17
50.00	4	Surface	1	0	0	10732.3	26.00	17.28
275.00	5	Surface	1	0	0	0.0		
291.96	6	Surface	1	0	1	2424.5	4.83	22.13
310.00	8	Surface	1	0	2	3814.5	6.12	30.52
312.00	9	Surface	1	0	0	614.2	1.69	4.51
315.20	10	Surface	1	1	1	1777.9	3.90	13.35
318.19	11	Surface	1	1	1	2877.0	5.27	29.37
321.57	12	Surface	1	1	1	1390.0	3.82	10.20
325.61	13	Surface	1	1	1	4525.7	18.86	32.77
363.38	14	Surface	1	1	1	1390.0	2.87	13.90
17.40	1	Tile	1	0	0	0.0		
32.56	2	Tile	1	1	0	1329.0	2.88	9.16
72.66	3	Tile	1	1	0	1735.0	5.14	3.76
84.39	4	Tile	1	1	1	8651.0	0.75	12.40
94.88	5	Tile	1	0	0	3034.0	4.83	24.82
97.92	6	Tile	1	1	1	7232.0	9.98	61.11
114.31	7	Tile	1	0	0	39.0	0.03	0.13
136.85	8	Tile	1	0	0	48.0	0.17	0.49
154.27	9	Tile	1	1	1	117.0	0.01	0.10
192.96	10	Tile	1	1	1	270.0	0.02	0.37
267.10	11	Tile	1	1	1	151.0	0.27	0.70
276.41	12	Tile	1	1	1	2830.0	1.63	8.19
291.92	13	Tile	1	1	1	14323.0	12.86	108.69
297.74	14	Tile	1	1	1	4590.0	2.77	25.93
310.38	15	Tile	1	1	1	18406.0	15.42	139.25
315.20	16	Tile	1	1	1	6282.0	11.87	35.16

Appendix 4A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988

-2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
318.19	17	Tile	1	1	1	9131.0	9.35	26.48
321.58	18	Tile	1	1	1	5646.0	17.38	30.54
325.63	19	Tile	1	1	1	8789.0	13.82	33.28
359.68	20	Tile	1	1	1	12226.0	9.44	90.27
17.40	1	Surface	2	1	1	17100.6	33.49	68.83
32.56	2	Surface	2	1	0	0.0		
48.00	3	Surface	2	0	0	4784.3	11.77	12.68
50.00	4	Surface	2	0	0	12704.2	71.41	380.32
275.00	5	Surface	2	0	0	517.2	2.65	9.46
291.96	6	Surface	2	0	3	4558.0	13.69	35.11
297.00	7	Surface	2	0	0	517.2	1.55	3.98
310.00	8	Surface	2	0	3	4040.8	6.58	30.10
312.00	9	Surface	2	0	0	678.9	1.93	2.06
315.20	10	Surface	2	1	2	1487.0	4.32	11.16
318.19	11	Surface	2	1	1	3652.9	5.63	29.30
321.57	12	Surface	2	1	1	2230.5	8.65	16.35
325.61	13	Surface	2	1	1	5398.5	12.98	37.61
363.38	14	Surface	2	1	1	4222.4	3.09	31.77
17.40	1	Tile	2	0	0	342.0	0.09	0.21
32.56	2	Tile	2	1	0	285.0	0.07	0.17
72.66	3	Tile	2	1	1	1533.0	0.69	2.70
84.39	4	Tile	2	1	1	8658.0	2.80	8.54
94.88	5	Tile	2	0	0	2439.0	0.09	3.46
97.92	6	Tile	2	1	1	5245.0	5.08	6.03
114.31	7	Tile	2	0	0	117.0	0.09	0.39
136.85	8	Tile	2	0	0	114.0	0.06	0.36
154.27	9	Tile	2	1	1	1126.0	0.04	1.60
192.96	10	Tile	2	1	1	343.0	0.06	0.63
267.10	11	Tile	2	0	0	211.0	0.17	0.71

Appendix 4A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for zero tillage, 1988

-3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
276.41	12	Tile	2	1	1	4273.0	2.30	13.67
291.92	13	Tile	2	1	1	11545.0	12.07	68.75
297.74	14	Tile	2	1	1	7719.0	4.67	44.77
310.38	15	Tile	2	1	1	9563.0	22.69	67.77
315.20	16	Tile	2	1	1	3671.0	6.60	22.96
318.19	17	Tile	2	1	1	6547.0	6.27	51.33
321.58	18	Tile	2	1	1	3947.0	15.06	20.21
325.63	19	Tile	2	1	1	6419.0	7.74	30.73
359.68	20	Tile	2	1	1	8554.0	10.74	69.60

Appendix 5A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for ridge tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
17.40	1	Surface	1	1	1	8889.7	21.64	11.11
32.56	2	Surface	1	1	0	2909.4	7.08	3.05
48.00	3	Surface	1	0	0	2327.5	5.67	2.44
50.00	4	Surface	1	0	0	14837.8	36.12	15.58
275.00	5	Surface	1	0	2	0.0		
291.96	6	Surface	1	0	2	4655.0	16.69	37.29
310.00	8	Surface	1	0	2	2780.1	3.74	20.17
312.00	9	Surface	1	0	0	323.3	3.39	1.39
315.20	10	Surface	1	1	3	1260.7	3.99	8.34
318.19	11	Surface	1	1	1	2650.8	3.82	15.53
321.57	12	Surface	1	1	1	743.5	7.80	3.19
325.61	13	Surface	1	1	1	4428.7	19.39	20.00
363.38	14	Surface	1	1	1	1519.3	3.70	8.69
17.40	1	Tile	1	0	0	498.0	2.48	1.63
32.56	2	Tile	1	1	0	2363.0	8.40	21.15
72.66	3	Tile	1	1	0	1967.0	5.19	1.57
84.39	4	Tile	1	1	1	8725.0	2.32	4.92
94.88	5	Tile	1	0	0	2898.0	8.32	8.48
97.92	6	Tile	1	1	1	6755.0	13.63	14.19
114.31	7	Tile	1	0	0	156.0	0.15	0.52
136.85	8	Tile	1	0	0	62.0	0.20	0.32
154.27	9	Tile	1	1	1	478.0	0.01	0.72
192.96	10	Tile	1	1	1	36.0	0.00	0.05
266.94	11	Tile	1	0	0	181.0	0.14	0.39
276.41	12	Tile	1	1	1	2104.0	1.44	5.71
291.92	13	Tile	1	1	1	13155.0	15.80	71.37
297.74	14	Tile	1	1	1	7500.0	6.02	29.66
310.38	15	Tile	1	1	1	17766.0	9.93	57.11
315.20	16	Tile	1	1	1	6742.0	19.53	32.75
318.19	17	Tile	1	1	1	12614.0	27.16	23.97
321.58	18	Tile	1	1	1	6706.0	58.87	29.17
325.63	19	Tile	1	1	1	13074.0	35.12	64.54
359.68	20	Tile	1	1	1	13081.0	10.90	84.81
17.40	1	Surface	2	1	2	14870.1	18.15	55.39
32.56	2	Surface	2	1	0	13900.3	45.88	95.91
48.00	3	Surface	2	0	0	6659.2	16.39	17.65
50.00	4	Surface	2	0	0	16712.7	93.94	473.97
275.00	5	Surface	2	0	2	937.5	22.59	2.21
291.96	6	Surface	2	0	3	13253.8	49.16	103.28
297.00	7	Surface	2	0	0	3620.5	28.19	24.28
310.00	8	Surface	2	0	2	5786.4	8.35	44.97
312.00	9	Surface	2	0	0	1099.1	3.13	3.34

Appendix 5A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for ridge tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
315.20	10	Surface	2	1	1	1131.4	3.24	5.83
318.19	11	Surface	2	1	1	3588.2	5.84	18.30
321.57	12	Surface	2	1	1	6626.9	63.36	28.03
325.61	13	Surface	2	1	1	8113.9	45.40	44.89
363.38	14	Surface	2	1	1	9180.7	9.28	33.05
17.40	1	Tile	2	0	0	565.0	0.66	0.28
32.56	2	Tile	2	1	0	1101.0	1.29	0.55
72.68	3	Tile	2	1	0	2169.0	3.00	3.90
84.39	4	Tile	2	1	1	8327.0	10.64	9.58
94.88	5	Tile	2	0	0	2095.0	0.17	3.81
97.92	6	Tile	2	1	1	4896.0	11.12	14.98
114.31	7	Tile	2	0	0	156.0	0.26	0.54
136.85	8	Tile	2	0	0	74.0	0.07	0.23
154.27	9	Tile	2	1	1	759.0	0.05	1.11
192.96	10	Tile	2	1	1	305.0	0.01	0.45
266.94	11	Tile	2	1	0	2298.0	3.81	7.89
276.41	12	Tile	2	1	1	6084.0	5.57	18.94
291.92	13	Tile	2	1	1	11490.0	15.30	88.70
297.74	14	Tile	2	1	1	8170.0	5.34	36.93
310.38	15	Tile	2	1	1	10271.0	7.99	47.41
315.20	16	Tile	2	1	1	4516.0	9.11	13.15
318.19	17	Tile	2	1	1	7974.0	9.05	37.88
321.58	18	Tile	2	1	1	4886.0	30.13	6.35
325.63	19	Tile	2	1	1	8299.0	16.24	31.40
359.68	20	Tile	2	1	1	8176.0	10.27	64.45

Appendix 6A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for conventional tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
17.40	1	Surface	1	1	0	4719.6	41.64	11.45
32.56	2	Surface	1	1	0	3200.3	28.23	7.76
48.00	3	Surface	1	0	0	0.0		
50.00	4	Surface	1	0	2	7629.0	67.32	18.54
275.00	5	Surface	1	0	0	0.0		
291.96	6	Surface	1	0	0	258.6	2.28	0.63
297.00	7	Surface	1	0	0	0.0		
310.46	8	Surface	1	0	0	549.5	8.01	2.03
312.00	9	Surface	1	0	0	0.0		
315.20	10	Surface	1	0	0	0.0		
318.19	11	Surface	1	0	0	678.9	1.31	2.47
321.57	12	Surface	1	0	0	226.3	0.44	0.82
325.81	13	Surface	1	1	1	1777.9	34.37	8.40
363.38	14	Surface	1	1	0	1519.3	16.15	5.50
17.40	1	Tile	1	0	0	662.0	0.27	0.31
32.56	2	Tile	1	1	0	1709.0	0.54	0.66
72.66	3	Tile	1	1	4	1967.0	0.80	0.93
84.39	4	Tile	1	1	1	11904.0	3.86	11.59
94.88	5	Tile	1	0	0	2187.0	0.75	1.86
97.92	6	Tile	1	1	1	5829.0	5.00	15.16
114.31	7	Tile	1	0	0	104.0	0.11	0.28
136.85	8	Tile	1	0	0	74.0	0.08	0.20
154.27	9	Tile	1	1	1	855.0	0.00	1.20
192.96	10	Tile	1	1	1	59.0	0.00	0.07
267.13	11	Tile	1	0	0	0.0		
276.41	12	Tile	1	1	1	396.0	0.41	1.05
291.92	13	Tile	1	1	1	10903.0	17.77	47.21
297.74	14	Tile	1	1	1	6267.0	5.25	22.56
310.38	15	Tile	1	1	1	13888.0	26.24	38.39
315.20	16	Tile	1	1	1	8362.0	75.22	29.56
318.19	17	Tile	1	1	1	17218.0	165.46	75.76
321.58	18	Tile	1	1	1	10156.0	458.56	10.77
325.63	19	Tile	1	1	1	19335.0	364.68	100.67
359.68	20	Tile	1	1	1	18810.0	18.77	117.94
19.00	1	Surface	2	0	1	9697.9	28.68	27.35
32.56	2	Surface	2	1	0	4784.3	31.44	18.95
48.00	3	Surface	2	0	0	4687.3	8.13	6.80
50.00	4	Surface	2	0	0	9019.0	145.78	79.66
275.00	5	Surface	2	0	0	549.5	6.76	0.66
291.96	6	Surface	2	0	3	2812.4	10.64	8.32
297.00	7	Surface	2	0	0	517.2	1.36	1.84

Appendix 6A. Samples taken and analyzed, event volumes, sediment and orthophosphate losses for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
310.46	8	Surface	2	0	0	0.0		
312.00	9	Surface	2	0	0	0.0		
315.20	10	Surface	2	1	2	7435.0	66.29	52.23
318.19	11	Surface	2	1	1	3135.7	24.17	7.71
321.57	12	Surface	2	1	1	3168.0	56.16	6.27
325.61	13	Surface	2	1	1	6582.2	92.12	29.02
363.38	14	Surface	2	1	0	3620.5	47.12	15.35
17.40	1	Tile	2	0	0	347.0	2.05	0.46
32.58	2	Tile	2	1	0	359.0	2.12	0.47
72.66	3	Tile	2	1	0	781.0	0.76	2.07
84.39	4	Tile	2	1	1	8099.0	5.80	14.28
94.88	5	Tile	2	0	0	1515.0	3.77	2.67
97.92	6	Tile	2	1	1	3477.0	4.01	6.29
114.31	7	Tile	2	0	0	65.0	0.07	0.12
136.85	8	Tile	2	0	0	74.0	0.16	0.20
154.27	9	Tile	2	1	1	464.0	0.01	0.77
192.96	10	Tile	2	0	0	33.0	0.02	0.09
267.13	11	Tile	2	0	0	0.0		
276.41	12	Tile	2	1	1	144.0	0.32	0.39
291.92	13	Tile	2	0	0	8411.0	10.41	31.49
297.74	14	Tile	2	1	1	6466.0	4.86	16.81
310.38	15	Tile	2	1	1	10634.0	12.01	28.50
315.20	16	Tile	2	1	1	6103.0	85.60	13.32
318.19	17	Tile	2	1	1	8574.0	96.61	67.31
321.58	18	Tile	2	1	1	5487.0	156.69	54.87
325.63	19	Tile	2	1	1	8460.0	135.66	65.00
359.68	20	Tile	2	1	1	10183.0	13.05	69.26

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage.
1989

Julian Time/89	Event #	Source	Rep #	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume Up/pt	
8	1	Surface	1	1	1	0.1801	0.1801	0.905	0.905	43446.6	
26	2	Surface	1	1	1	0.6919	0.6919	1.000	1.000	0.0	
93	3	Surface	1	1	1	0.3878	0.3878	0.600	0.600	44190.0	
108	4	Surface	1	1	0					0.0	
146	5	Surface	1	1	1	2.1486	1.2000	2.950	3.137	1839.4	
146	5	Surface	1	1	1	0.9612		3.150			
146	5	Surface	1	1	1	0.4901		3.310			
146	5	Surface	1	0	0						
151	6	Surface	1	1	1	1.1239	0.4690	0.789	1.941	12135.3	
151	6	Surface	1	1	1	0.5328		1.400			
151	6	Surface	1	1	1	0.2069		0.345			
152	6	Surface	1	1	1	0.2744		3.760			
153	6	Surface	1	1	1	0.2069		3.410			
155	7	Surface	1	1	1	0.6908	0.4122	0.980	2.140	2240.2	
155	7	Surface	1	1	1	0.3830		2.550			
155	7	Surface	1	1	1	0.1627		2.910			
169	8	Surface	1	0	0		0.4406		2.040	2405.1	
171	9	Surface	1	1	1	0.2329	0.1368	9.750	9.600	3539.7	
171	9	Surface	1	1	1	0.0404		9.450			
201	10	Surface	1	0	0		0.1412	1.000	1.000	4842.5	
201	10	Surface	1	1	1	0.1973	0.5472	0.330	0.248	4790.8	
320	11	Surface	1	1	1	0.8971		0.166			
320	11	Surface	1	1	1	0.1566	0.1566	0.826	0.826	3967.0	
8	1	Tile	1				0.2151	0.2151	0.691	0.691	1430.0
26	2	Tile	1				0.4210	0.4210	0.260	0.260	15214.0
87	3	Tile	1				0.1720	0.1720	0.175	0.175	17203.0
93	4	Tile	1				0.2965		0.218		17197.0
108	5	Tile	1								

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage,
1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
145	6	Tile	1	1	1	0.2712	0.2912	0.510	1.344	15100.0
145	6	Tile	1	1	1	0.0249		0.045		
146	6	Tile	1	1	1	0.8087		3.850		
146	6	Tile	1	1	1	0.4242		2.000		
146	6	Tile	1	1	1	0.3676		0.250		
146	6	Tile	1	1	1	0.0978		2.470		
147	6	Tile	1	1	1	0.0438		0.280		
151	7	Tile	1	1	1	0.4732	0.1593	1.500	0.987	20421.0
151	7	Tile	1	1	1	0.1000		0.150		
151	7	Tile	1	1	1	0.1782		2.150		
152	7	Tile	1	1	1	0.0610		0.530		
152	7	Tile	1	1	1	0.1432		0.575		
153	7	Tile	1	1	1	0.0280		0.189		
153	7	Tile	1	1	1	0.2342		2.300		
153	7	Tile	1	1	1	0.0662		0.490		
155	8	Tile	1	1	1	0.3007	0.2225	0.885	0.919	14584.0
155	8	Tile	1	1	1	0.1443		0.953		
167	9	Tile	1	1	1	0.0457		0.490	0.381	10389.0
167	9	Tile	1	1	1	0.1046		0.282		
169	9	Tile	1	1	1	0.3675	0.2779	1.500	1.073	6446.0
171	10	Tile	1	1	1	0.2786		0.255		
171	10	Tile	1	1	1	0.1884		0.645		
201	11	Tile	1	1	1	0.3204	0.2023	0.125	0.078	12157.0
201	11	Tile	1	1	1	0.1009		0.090		
201	11	Tile	1	1	1	0.0020		0.100		
201	11	Tile	1	1	1	0.0842		0.030		
320	12	Tile	1	1	1	0.1933	0.1369	0.161	0.178	12165.0

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage.
1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
320	12	Tile	1	1	1	0.0805	0.175	0.965	57702.5	
8	1	Surface	2	1	1	0.1927	0.965	0.690	2866.7	
26	2	Surface	2	1	1	0.3301	0.3301	0.265	4709.9	
93	3	Surface	2	1	1	0.2461	0.2461	1.551	1548.4	
108	4	Surface	2	1	0	0.4041	0.5621	0.095	2.836	1852.3
146	5	Surface	2	1	1	1.1434	0.6232	2.750		
146	5	Surface	2	1	1	0.3325	0.3325	4.050		
146	5	Surface	2	1	1	0.1495	0.1495	4.450		
146	5	Surface	2	1	1	1.2109	0.4682	0.950	1.844	12494.1
151	6	Surface	2	1	1	0.3246	0.2132	1.510		
151	6	Surface	2	1	1	0.2989	0.2989	2.850		
151	6	Surface	2	1	1	0.2936	0.2936	2.010		
152	6	Surface	2	1	1	0.7069	0.7069	1.900		
153	6	Surface	2	1	1	0.3247	0.3247	0.990	2.363	2637.8
155	7	Surface	2	1	1	0.2283	0.2283	2.950		
155	7	Surface	2	1	0	0.4441	0.4441	3.240		
169	8	Surface	2	1	0	0.4441	0.4441	2.119	2405.1	
171	9	Surface	2	0	0	0.3275	0.3072	0.766	2.119	3539.1
201	10	Surface	2	1	1	0.2869	0.2869	0.950		
201	10	Surface	2	1	1	0.2154	0.2849	0.340	0.304	4005.2
320	11	Surface	2	1	1	0.3543	0.3543	0.268		
8	1	Tile	2	1	1	0.1347	0.1347	0.480	2030.0	
26	2	Tile	2	1	1	0.1604	0.1604	0.810	650.0	
87	3	Tile	2	1	1	0.2006	0.2006	0.170	13065.0	
93	4	Tile	2	1	1	0.1207	0.1207	0.125	16996.0	

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage.

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
108	5	Tile	2	1	0	0.2180	0.1606	0.1148	24580.0	9816.0
145	6	Tile	2	1	1	0.0085	0.2678	1.222		
145	6	Tile	2	1	1	0.7924		0.250		
146	6	Tile	2	1	1	0.3920		2.600		
146	6	Tile	2	1	1	0.2862		0.205		
146	6	Tile	2	1	1	0.0955		3.050		
146	6	Tile	2	1	1	0.0821		0.210		
147	6	Tile	2	1	1	0.1395	0.1222	0.140	1.329	13274.0
151	7	Tile	2	1	1	0.2560		2.200		
151	7	Tile	2	1	1	0.1984		2.500		
151	7	Tile	2	1	1	0.0469		0.205		
152	7	Tile	2	1	1	0.1353		0.595		
152	7	Tile	2	1	1	0.0270		1.800		
153	7	Tile	2	1	1	0.1285		0.305		
153	7	Tile	2	1	1	0.0462		2.570		
153	7	Tile	2	1	1	0.2578	0.1985	0.455		
155	8	Tile	2	2	0	0.1391		1.000	1.000	5073.0
155	8	Tile	2	2	1	0.1358	0.1119	0.570	0.434	4273.0
167	9	Tile	2	2	1	0.0408		0.235		
167	9	Tile	2	2	1	0.0879		0.298		
169	9	Tile	2	2	1	1.1116	0.7595	1.150	1.054	13297.0
171	10	Tile	2	2	1	0.9206		0.200		
171	10	Tile	2	2	1	0.4074		0.958		
171	10	Tile	2	2	1	0.3696	0.2290	0.275	0.300	14816.0
201	11	Tile	2	2	1	0.1420		0.195		
201	11	Tile	2	2	1	0.0038		0.130		
201	11	Tile	2	2	1	0.325		0.325		
201	11	Tile	2	2	1	0.0884				

Appendix 7A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
320	12	Tile	2	1	1	0.2034	0.1947	0.375	0.338	4300.0
320	12	Tile	2	1	1	0.1860	0.301	0.301		

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Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
8	1	Surface	1	1	1	0.2464	0.2464	0.395	0.395	3168.0
26	2	Surface	1	1	1	0.9329	0.9329	0.389	0.389	1198.1
93	3	Surface	1	1	1	0.3796	0.3796	0.194	0.194	4965.3
108	4	Surface	1	1	0	3.4744	1.6580	0.615	1.758	1092.6
146	5	Surface	1	1	1	1.7464	1.7464	0.656		4176.6
146	5	Surface	1	1	1	0.9812	0.9812	1.310		
146	5	Surface	1	1	1	0.4300	0.4300	4.450		
151	6	Surface	1	1	1	1.9195	1.1586	0.575	0.650	15671.8
151	6	Surface	1	1	1	2.3050	2.3050	0.715		
151	6	Surface	1	1	1	0.4918	0.4918	0.940		
152	6	Surface	1	1	1	0.3747	0.3747	0.250		
153	6	Surface	1	1	1	0.7019	0.7019	0.770		
155	7	Surface	1	1	1	1.1690	1.1690	0.505	0.488	2369.9
155	7	Surface	1	1	1	0.3346	0.3346	0.470		
155	7	Surface	1	1	1	0.2985	0.2985	0.490		
168	8	Surface	1	0	0	0	0			
168	8	Surface	1	0	0	0	0			
168	8	Surface	1	0	0	0	0			
168	8	Surface	1	0	0	0	0			
169	8	Surface	1	0	0	0	0			
171	9	Surface	1	0	0	0	0			
171	9	Surface	1	1	1	1.0815	0.8696	0.220	0.230	8462.4
171	9	Surface	1	1	1	0.6576	0.6576	0.240		
201	10	Surface	1	0	0	0	0			
201	10	Surface	1	1	1	0.2286	0.2286	0.995	0.995	5282.1

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tileage.
1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
320	11	Surface	1	1	1	0.2700	0.9545	0.129	0.165	4529.9
320	11	Surface	1	1	1	1.6390	0.200	0.328	0.328	4867.0
8	1	Tile	1	1	1	0.5092	0.5092	0.895	0.895	2399.0
26	2	Tile	1	1	1	0.3555	0.3555	0.105	0.105	15852.0
87	3	Tile	1	1	1	0.3751	0.3751	0.065	0.065	20744.0
93	4	Tile	1	1	1	0.1522	0.1522	0.060	0.060	17585.0
108	5	Tile	1	1	0	0.2637	0.4909	0.080	0.406	11978.0
145	6	Tile	1	1	1	0.2676	0.2676	0.270	0.270	
145	6	Tile	1	1	1	0.0143	1.3644	0.590		
146	6	Tile	1	1	1	1	0.9891	0.055		
146	6	Tile	1	1	1	1	0.5204	0.925		
146	6	Tile	1	1	1	1	0.1933	0.880		
146	6	Tile	1	1	1	1	0.1469	0.045		
147	6	Tile	1	1	1	1	0.9616	0.2870	0.380	19201.0
151	7	Tile	1	1	1	1	0.3087	0.315		
151	7	Tile	1	1	1	1	0.2564	0.230		
152	7	Tile	1	1	1	1	0.0683	0.380		
152	7	Tile	1	1	1	1	0.2369	0.310		
153	7	Tile	1	1	1	1	0.0357	0.176		
153	7	Tile	1	1	1	1	0.3610	0.325		
153	7	Tile	1	1	1	1	0.0672	0.245		
155	8	Tile	1	1	1	1	0.3681	0.2216	0.220	11207.0
155	8	Tile	1	1	1	1	0.0752	0.120		
167	9	Tile	1	1	1	1	0.1600	0.0970	0.548	10066.0
167	9	Tile	1	1	1	1	0.0550	0.095		
169	9	Tile	1	1	1	1	0.0760	0.348		
171	10	Tile	1	1	1	1	0.5330	0.3955	0.915	10645.0

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage.
1989

Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
171	10	Tile	1	1	1	0.5187	0.950	0.380	0.145	12190.0
171	10	Tile	1	1	1	0.1348	0.100	0.100	0.145	12190.0
201	11	Tile	1	1	1	0.3103	0.1500	0.070	0.020	
201	11	Tile	1	1	1	0.1713	0.0907	0.390	0.127	
201	11	Tile	1	1	1	0.0278	0.0278	0.020	0.020	
201	11	Tile	1	1	1	0.0907	0.1739	0.1166	0.045	
320	12	Tile	1	1	1	0.0594	0.0594	0.3119	0.580	
320	12	Tile	1	1	1	0.6878	0.6878	0.6878	0.408	
8	1	Surface	2	1	1	0.7771	0.7771	0.7771	0.255	
26	2	Surface	2	1	1	0.7324	0.7324	0.7324	0.392	
93	3	Surface	2	1	1	2.8046	1.3147	1.3147	1.432	
108	4	Surface	2	1	1	1.3461	1.3461	1.3461	1.406	
146	5	Surface	2	1	1	0.8138	0.8138	0.8138	0.671	
146	5	Surface	2	1	1	0.2944	0.2944	0.2944	2.510	
146	5	Surface	2	1	1	0.7859	0.7859	0.7859	0.591	
151	6	Surface	2	1	1	0.2805	0.2805	0.2805	0.735	
151	6	Surface	2	1	1	0.4656	0.4656	0.4656	0.880	
152	6	Surface	2	1	1	0.2784	0.2784	0.2784	0.531	
153	6	Surface	2	1	1	0.4509	0.4509	0.4509	0.619	
155	7	Surface	2	1	1	0.4676	0.4676	0.4676	0.510	
155	7	Surface	2	1	1	0.4842	0.4842	0.4842	0.515	
155	7	Surface	2	1	1	0.2862	0.2862	0.2862	0.615	

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
168	8	Surface	2	1	1	0.4404	0.474			
168	8	Surface	2	1	1	0.1259	0.201			
168	8	Surface	2	1	1	0.1256	0.709			
168	8	Surface	2	1	1	0.1923	0.510			
168	8	Surface	2	1	1	0.1320	0.585			
168	8	Surface	2	1	1	0.1916	0.561			
169	8	Surface	2	1	1	0.7112	0.449			
171	9	Surface	2	1	1	1.0101	0.5508	1.950	1.060	8462.4
171	9	Surface	2	1	1	0.0915	0.150			
171	9	Surface	2	0	0					
201	10	Surface	2	0	0					
201	10	Surface	2	1	1	0.3309	0.715			
320	11	Surface	2	1	1	0.1494	0.125			
320	11	Surface	2	1	1	0.4796	0.184			
8	1	Tile	2	1	1	0.5864	0.475	0.475	2259.0	
26	2	Tile	2	1	1	0.3256	1.000	1.000	1119.0	
87	3	Tile	2	1	1	0.4280	0.4280	0.225	12936.0	
93	4	Tile	2	1	1	0.1265	0.1265	0.100	0.100	17588.0
108	5	Tile	2	1	0	0.6500	0.6500	0.069	0.069	12064.0
145	6	Tile	2	1	1	0.1603	0.3776	0.900	0.555	7011.0
145	6	Tile	2	2	1					
146	6	Tile	2	2	1	1.0246	0.550			
146	6	Tile	2	2	1	0.5459	0.465			
146	6	Tile	2	2	1	0.4237	0.695			
146	6	Tile	2	2	1	0.0850	0.555			
147	6	Tile	2	2	1	0.0262	0.165			
151	7	Tile	2	2	2	0.7766	0.7766	0.490	0.291	8617.0
151	7	Tile	2	2	2	0.4203	0.410			

Appendix 8A. Samples taken and analyzed, event volume, sediment and orthophosphate concentrations for ridge tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
151	7	Tile	2	1	1	0.2538		0.380			
152	7	Tile	2	1	1	0.0520		0.225			
152	7	Tile	2	1	1	0.1984		0.225			
153	7	Tile	2	1	1	0.0197		0.135			
153	7	Tile	2	1	1	0.3072		0.305			
153	7	Tile	2	1	1	0.0252		0.155			
155	8	Tile	2	1	1	0.4270		0.407		0.314	5705.0
155	8	Tile	2	1	1	0.0951		0.220			
167	9	Tile	2	1	1	0.1886		0.191		0.155	5959.0
167	9	Tile	2	1	1	0.0477		0.111			
169	9	Tile	2	1	1	0.0676		0.162			
171	10	Tile	2	1	1	0.2762		0.520		1.163	20892.0
171	10	Tile	2	1	1	0.0216		1.520			
171	10	Tile	2	1	1	0.5642		1.450			
201	11	Tile	2	1	1	0.4167		0.185		0.246	11767.0
201	11	Tile	2	1	1	0.1776		0.125			
201	11	Tile	2	1	1	0.0084		0.140			
201	11	Tile	2	1	1	0.0985		0.535			
320	12	Tile	2	1	1	0.1118		0.140		0.113	12154.0
320	12	Tile	2	1	1	0.0525		0.065			

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analysed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Ortho P. Conc., mg/L	Event Volume L/plot
8	1	Surface	1	0	0	0	0	0.0	0.0	0.0
26	2	Surface	1	0	0	0	0	0.0	0.0	0.0
93	3	Surface	1	0	0	0	0	0.0	0.0	0.0
108	4	Surface	1	0	0	0	0	0.0	0.0	0.0
146	5	Surface	1	1	1	4.3216	2.9142	0.165	0.182	779.1
146	5	Surface	1	1	1	2.4418	0.155	0.155	0.155	0.155
146	5	Surface	1	1	1	1.9792	0.225	0.225	0.225	0.225
146	5	Surface	1	0	0	0	0	0.0	0.0	0.0
151	6	Surface	1	1	1	1.8260	0.6312	0.159	0.159	10742.0
151	6	Surface	1	1	1	0.4286	0.335	0.335	0.335	0.335
151	6	Surface	1	1	1	0.2383	0.100	0.100	0.100	0.100
152	6	Surface	1	1	1	0.5365	0.210	0.210	0.210	0.210
153	6	Surface	1	1	1	0.1262	0.245	0.245	0.245	0.245
155	7	Surface	1	1	1	0.7762	0.4412	0.312	0.213	2185.3
155	7	Surface	1	1	1	0.3616	0.115	0.115	0.115	0.115
155	7	Surface	1	1	1	0.1857	0.211	0.211	0.211	0.211
168	8	Surface	1	0	0	0	0.4412	0.213	0.213	2508.5
168	8	Surface	1	0	0	0	0	0.0	0.0	0.0
168	8	Surface	1	0	0	0	0	0.0	0.0	0.0

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Canc., g/L	Event Sediment Canc., g/L	Ortho P. Conc., mg/L	Ortho P. Conc., mg/L	Event Volume L/plot
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
168	8	Surface	1	0	0					
169	8	Surface	1	0	0					
171	9	Surface	1	0	0					
171	9	Surface	1	1	1	0.5397	0.6256	0.285	0.168	4415.8
171	9	Surface	1	0	0					
171	9	Surface	1	1	1	0.7114				
201	10	Surface	1	0	0					
201	10	Surface	1	1	1	0.2254	0.2254	0.590	0.590	4021.4
320	11	Surface	1	0	0					
320	11	Surface	1	0	0					
8	1	Tile	1	1	1	0.3495	0.3495	0.495	0.495	5805.0
26	2	Tile	1	1	0					
87	3	Tile	1	1	1	0.3170	0.3170	0.110	0.110	18908.0
93	4	Tile	1	1	1	0.1493	0.1493	0.075	0.075	24420.0
108	5	Tile	1	0	0					
145	6	Tile	1	1	1	1.0088	0.7404	0.249	0.249	10896.0

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

- 3

Julian Time/89	Event #	Source	Rep #	Taken #	Analyzed #	Sediment Conc., g/L	Sediment Conc., mg/L	Event Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
145	6	Tile	1	1	1	0.0236	0.215			
146	6	Tile	1	1	1	1.4534	0.1190			
146	6	Tile	1	1	1	1.1745	0.285			
146	6	Tile	1	1	1	0.9089	0.515			
146	6	Tile	1	1	1	0.5595	0.380			
147	6	Tile	1	0	1	0.0542	0.100			
151	7	Tile	1	1	1	0.5219	0.3620	0.115	0.209	25869.0
151	7	Tile	1	1	1	0.6862	0.170			
151	7	Tile	1	1	1	0.4067	0.310			
152	7	Tile	1	1	1	0.1795	0.225			
152	7	Tile	1	1	1	0.4293	0.255			
153	7	Tile	1	1	1	0.0251	0.105			
153	7	Tile	1	1	1	0.3055	0.325			
153	7	Tile	1	1	1	0.3414	0.170			
155	8	Tile	1	0	1	0.4760	0.4033	0.185	0.220	11889.0
155	8	Tile	1	1	1	0.3306	0.255			
167	9	Tile	1	1	1	0.4159	0.7377	0.237	0.214	23058.0
167	9	Tile	1	1	1	0.0281	0.060			
169	9	Tile	1	1	1	1.0595	0.190			

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
171	10	Tile	1	1	1	0.6118	0.5282	0.275	0.248	35810.0
171	10	Tile	1	1	1	0.0434		0.795		
171	10	Tile	1	1	1	0.4446		0.220		
201	11	Tile	1	1	1	0.3352	0.2079	0.065	0.148	17984.0
201	11	Tile	1	1	1	0.1284		0.050		
201	11	Tile	1	1	1	0.0065		0.050		
201	11	Tile	1	1	1	0.0607		0.230		
320	12	Tile	1	0	0		0.2079		0.148	555.0
320	12	Tile	1	0	0					
8	1	Surface	2	1	1	0.6572	0.6572	0.396	0.396	37951.1
26	2	Surface	2	0	0					0.0
93	3	Surface	2	1	1	0.1735	0.1735	0.145	0.145	6607.5
108	4	Surface	2	0	0			0.4153	0.271	911.6
146	5	Surface	2	1	1	2.9521	1.6164	2.140	0.883	4625.9
146	5	Surface	2	1	1	1.8360		0.263		
146	5	Surface	2	1	1	1.1838		0.205		
146	5	Surface	2	1	1	0.4936		0.925		
151	6	Surface	2	1	1	2.4686	1.0518	0.079	0.119	15920.7
151	6	Surface	2	1	1	1.4933		0.062		

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
151	6	Surface	2	1	1	0.2886		0.250		
152	6	Surface	2	1	1	0.6716		0.090		
153	6	Surface	2	1	1	0.3368		0.1115		
155	7	Surface	2	1	1	1.1579		0.136		
155	7	Surface	2	1	1	0.3428		0.091		
155	7	Surface	2	1	1	0.4091		0.085		
167	8	Surface	2	1	1	0.2458		3.6000		
168	8	Surface	2	1	1	0.2020		0.600		
168	8	Surface	2	1	1	0.2650		0.500		
168	8	Surface	2	0	0					
168	8	Surface	2	1	1	0.2038		0.535		
168	8	Surface	2	1	1	0.2181		0.185		
168	8	Surface	2	1	1	0.6662		0.220		
168	8	Surface	2	1	1	0.2356		0.265		
168	8	Surface	2	1	1	0.1505		0.570		
168	8	Surface	2	1	1	0.6302		0.201		
169	8	Surface	2	0	0					
171	9	Surface	2	1	1	0.1642		0.2949		
171	9	Surface	2	1	1	0.5784		0.084		
									0.246	4415.8
									0.094	

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Ortho P. Conc., mg/L	Event Volume L/plot
171	9	Surface	2	1	1	0.4256	0.407	0.0	0.0	- 6
171	9	Surface	2	0	0					
201	10	Surface	2	0	0					
201	10	Surface	2	1	1	0.2631	0.2631	0.356	0.356	4021.4
320	11	Surface	2	0	0	0.2631	0.2631	0.356	0.356	1871.7
320	11	Surface	2	0	0					
8	1	Tile	2	1	1	0.4943	0.4943	0.536	0.536	3369.0
26	2	Tile	2	1	1	0.1859	0.1859	0.045	0.045	1765.0
87	3	Tile	2	1	1	1.5773	1.5773	0.141	0.141	7961.0
93	4	Tile	2	1	1	0.4677	0.4677	0.075	0.075	19885.0
108	5	Tile	2	0	0					
145	6	Tile	2	1	1	0.0137	0.2443	0.050	0.393	5246.0
145	6	Tile	2	1	1	0.0250	0.0250	0.100	0.100	
146	6	Tile	2	1	1	0.3801	0.3801	0.090	0.090	
146	6	Tile	2	1	1	0.3773	0.3773	1.500	1.500	
146	6	Tile	2	1	1	0.4263	0.4263	0.275	0.275	
146	6	Tile	2	1	1	0.4314	0.4314	0.345	0.345	
147	6	Tile	2	0	1	0.0561	0.0561	0.390	0.390	
151	7	Tile	2	1	1	0.4182	0.2218	0.075	0.075	0.2225 11471.0

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., g/L	Ortho P. Conc., mg/L	Ortho P. Conc., mg/L	Event Volume L/plot
151	7	Tile	2	1	1	0.3214	0.125			
151	7	Tile	2	1	1	0.2870	0.375			
152	7	Tile	2	1	1	0.1304	0.265			
152	7	Tile	2	1	1	0.1611	0.180			
153	7	Tile	2	1	1	0.0528	0.250			
153	7	Tile	2	1	1	0.2252	0.295			
153	7	Tile	2	1	1	0.1780	0.235			
155	8	Tile	2	0	1	0.1450	0.1637	0.145	0.198	6650.0
155	8	Tile	2	1	1	0.1824	0.250			
167	9	Tile	2	1	1	0.2707	0.2781	0.147	0.134	8712.0
167	9	Tile	2	1	1	0.1075	0.083			
169	9	Tile	2	1	1	0.2856	0.120			
171	10	Tile	2	1	1	0.7315	0.5930	0.730	0.520	10952.0
171	10	Tile	2	1	1	0.5504	0.835			
171	10	Tile	2	1	1	0.4546	0.310			
201	11	Tile	2	1	1	0.4168	0.2456	0.040	0.060	14075.0
201	11	Tile	2	1	1	0.1264	0.030			
201	11	Tile	2	1	1	0.0129	0.060			
201	11	Tile	2	1	1	0.0743	0.080			

Appendix 9A. Samples taken, analyzed, event concentrations and losses for conventional tillage 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Sediment Conc., g/L	Event Sediment Conc., mg/L	Ortho P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Volume L/plot
320	12	Tile		2	1	0				
320	12	Tile		2	0	1	0.1044	0.1044	0.055	0.055

Appendix 10A.

Events volumes, sediment and orthophosphate losses from zero tillage,
1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
8	1	Surface	1	43447	78.26	393.19
26	2	Surface	1	0	0.00	0.00
93	3	Surface	1	4419	17.14	26.51
108	4	Surface	1	0	0.00	0.00
146	5	Surface	1	1839	22.07	57.70
151	6	Surface	1	12135	56.91	235.52
155	7	Surface	1	2240	9.23	47.94
169	8	Surface	1	2405	10.60	49.07
171	9	Surface	1	3540	4.84	339.81
201	10	Surface	1	4843	6.84	48.43
320	11	Surface	1	4791	26.21	11.88
8	1	Tile	1	3987	6.24	32.93
26	2	Tile	1	1430	3.08	9.88
87	3	Tile	1	15214	64.06	39.56
93	4	Tile	1	17203	29.59	30.11
108	5	Tile	1	17197	50.99	37.40
145	6	Tile	1	15100	43.97	202.88
151	7	Tile	1	20421	32.52	201.50
155	8	Tile	1	14564	32.41	133.84
167	9	Tile	1	10389	10.58	39.58
171	10	Tile	1	6446	17.92	69.13
201	11	Tile	1	12157	24.59	9.42
320	12	Tile	1	12165	16.65	21.65
8	1	Surface	2	57703	111.18	556.83
26	2	Surface	2	2887	9.53	19.92
93	3	Surface	2	4710	11.59	12.48
108	4	Surface	2	1548	6.26	24.01
146	5	Surface	2	1852	10.41	52.54
151	6	Surface	2	12494	58.50	230.39
155	7	Surface	2	2638	11.08	63.13
169	8	Surface	2	2405	10.68	50.96
171	9	Surface	2	3539	15.72	74.98
201	10	Surface	2	4843	14.88	37.07
320	11	Surface	2	4005	11.41	12.18
8	1	Tile	2	2030	2.73	9.74
26	2	Tile	2	650	1.04	5.27
87	3	Tile	2	13065	26.21	22.21
93	4	Tile	2	16996	20.51	21.25
108	5	Tile	2	24588	39.50	36.27
145	6	Tile	2	9816	26.29	119.97
151	7	Tile	2	13274	16.22	176.38
155	8	Tile	2	5073	10.07	50.73

Appendix 10A.

Events volume, sediment and orthophosphate losses from zero tillage,
1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
167	9	Tile	2	4273	4.78	18.54
171	10	Tile	2	13297	100.99	140.15
201	11	Tile	2	14816	33.93	44.45
320	12	Tile	2	4390	8.55	14.84

Appendix 11A.

Events volumes, sediment and orthophosphate losses for ridge tillage,
1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
8	1	Surface	1	3168	7.80	12.51
26	2	Surface	1	1196	11.16	4.65
93	3	Surface	1	4965	18.85	9.63
108	4	Surface	1	1093	0.00	0.00
146	5	Surface	1	4177	69.25	73.41
151	6	Surface	1	15672	181.57	101.87
155	7	Surface	1	2389	14.35	11.67
168	8	Surface	1	1694	3.12	7.47
171	9	Surface	1	8482	73.76	19.51
201	10	Surface	1	5282	12.07	52.56
320	11	Surface	1	4529	43.23	7.45
8	1	Tile	1	4867	24.78	15.96
26	2	Tile	1	2999	10.66	26.84
87	3	Tile	1	15852	59.46	16.64
93	4	Tile	1	20744	31.58	11.41
108	5	Tile	1	17585	46.36	14.07
145	6	Tile	1	11978	58.79	48.68
151	7	Tile	1	19201	55.10	56.16
155	8	Tile	1	11207	24.84	19.05
167	9	Tile	1	10066	9.76	33.25
171	10	Tile	1	10645	42.10	79.66
201	11	Tile	1	12190	18.29	17.68
320	12	Tile	1	9911	11.56	8.52
8	1	Surface	2	8925	27.84	51.77
26	2	Surface	2	2586	17.79	10.55
93	3	Surface	2	4965	38.59	12.66
108	4	Surface	2	1432	10.49	4.75
146	5	Surface	2	1807	23.76	25.41
151	6	Surface	2	18187	82.25	122.07
155	7	Surface	2	3213	13.26	17.57
167	8	Surface	2	1694	4.94	6.88
171	9	Surface	2	8482	46.72	89.07
201	10	Surface	2	5282	17.48	37.77
320	11	Surface	2	2622	8.25	4.05
8	1	Tile	2	2259	13.25	10.73
26	2	Tile	2	1119	3.64	11.19
87	3	Tile	2	12936	55.37	29.11
93	4	Tile	2	17588	22.25	17.59
108	5	Tile	2	12064	33.45	17.59
145	6	Tile	2	7011	26.47	38.91
151	7	Tile	2	8617	22.14	25.04
155	8	Tile	2	5705	14.89	17.89

Appendix 11A. Events volumes, sediment and orthophosphate losses for ridge tillage,
1989 - 2

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
167	9	Tile	2	5959	6.04	9.22
171	10	Tile	2	20892	60.03	243.04
201	11	Tile	2	11767	20.66	28.98
320	12	Tile	2	12154	9.98	13.67

Appendix 12A. Event volumes and losses for conventional tillage 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
8	1	Surface	1	0	0.00	0.00
26	2	Surface	1	0	0.00	0.00
93	3	Surface	1	0	0.00	0.00
108	4	Surface	1	0	0.00	0.00
146	5	Surface	1	779	22.70	1.42
151	6	Surface	1	10742	67.80	129.96
155	7	Surface	1	2185	9.64	4.65
168	8	Surface	1	2509	11.07	5.33
171	9	Surface	1	4416	27.62	8.28
201	10	Surface	1	4021	9.06	23.73
320	11	Surface	1	1872	4.22	11.04
8	1	Tile	1	5805	20.29	28.73
26	2	Tile	1	2094	7.32	10.37
87	3	Tile	1	18908	59.95	20.80
93	4	Tile	1	24420	36.45	18.32
108	5	Tile	1	28705	66.93	26.55
145	6	Tile	1	10896	80.68	27.08
151	7	Tile	1	25869	93.63	54.16
155	8	Tile	1	11889	47.95	26.16
167	9	Tile	1	23058	170.09	49.23
171	10	Tile	1	35810	189.16	88.63
201	11	Tile	1	17984	37.40	26.53
320	12	Tile	1	555	1.15	0.82
8	1	Surface	2	37951	249.40	150.29
26	2	Surface	2	0	0.00	0.00
93	3	Surface	2	6608	11.47	9.58
108	4	Surface	2	912	3.79	2.47
146	5	Surface	2	4626	74.77	40.86
151	6	Surface	2	15921	167.45	18.98
155	7	Surface	2	3646	23.21	3.79
167	8	Surface	2	2509	7.85	1.96
171	9	Surface	2	4416	13.02	10.84
201	10	Surface	2	4021	10.58	14.32
320	11	Surface	2	1872	4.92	6.66
8	1	Tile	2	3369	16.65	18.06
26	2	Tile	2	1765	3.28	0.79
87	3	Tile	2	7961	125.57	11.23
93	4	Tile	2	19885	93.01	14.91
108	5	Tile	2	10950	111.97	11.83
145	6	Tile	2	5246	12.81	20.61
151	7	Tile	2	11471	25.44	25.81
155	8	Tile	2	6650	10.88	13.13

Appendix 12A.

Events volumes, sediment and orthophosphate losses for conventional
tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume L/plot	Sediment loss, kg/ha	Ortho P. loss, g/ha
167	9	Tile	2	8712	24.23	11.63
171	10	Tile	2	10952	64.95	56.95
201	11	Tile	2	14075	34.56	8.45
320	12	Tile	2	2313	2.42	1.27

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	1	1	82269.07	0.2083	0.2023	16.73
4	1	Surface	1	1	1	10059.94	0.1983	0.2459	24.74
10	2	Surface	1	1	0	0.00	0.00	0.00	0.00
18	3	Surface	1	1	0	0.00	0.00	0.00	0.00
38	4	Surface	1	1	0	0.00	0.00	0.00	0.00
39	5	Surface	1	1	0	0.00	0.00	0.00	0.00
39	5	Surface	1	1	1	8585.87	0.0813	0.0920	7.90
39	5	Surface	1	1	1	0.1028	0.1028	0.1028	0.00
53	6	Surface	1	1	1	17113.54	0.1514	0.1922	32.89
53	6	Surface	1	1	1	0.2329	0.2329	0.2329	0.00
58	7	Surface	1	1	0	0.00	0.00	0.00	0.00
101	8	Surface	1	1	0	4040.79	0.0909	0.0909	3.67
134	9	Surface	1	1	0	4583.87	0.0800	0.0800	3.67
136	10	Surface	1	1	1	5521.33	0.1302	0.1183	6.53
137	10	Surface	1	1	1	0.1053	0.1053	0.1053	0.00
137	11	Surface	1	1	1	3022.51	0.1622	0.1622	4.90
159	12	Surface	1	1	0	0.00	0.00	0.00	0.00
159	12	Surface	1	1	0	0.00	0.00	0.00	0.00
195	13	Surface	1	1	0	0.00	0.00	0.00	0.00
225	14	Surface	1	1	0	0.00	0.00	0.00	0.00
231	15	Surface	1	1	0	694C. ^a	0.3336	0.2701	16.75
250	16	Surface	1	1	1	0.2066	0.2066	0.1416	10.09
250	16	Surface	1	1	1	0.1416	0.1416	0.1416	0.00
250	17	Surface	1	1	0	0.00	0.00	0.00	0.00
258	18	Surface	1	1	1	7574.05	0.0746	0.1362	10.32
258	18	Surface	1	1	1	0.1620	0.1620	0.1520	0.00
258	18	Surface	1	1	1	0.1520	0.1520	0.1520	0.00

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

- 2 -									
Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	19	Surface	1	1	1	5964.20	0.3442	0.3442	20.53
262	20	Surface	1	1	1	5531.03	0.1670	0.1232	6.61
262	20	Surface	1	1	1		0.1076		
262	20	Surface	1	0	1	2641.06	0.1118	0.1118	2.95
265	21	Surface	1	1	1	0.00		0.0733	
265	21	Tile	1	0	0	166.00			0.12
4	1	Tile	1	1	1	12822.00	0.0487	0.0733	9.40
10	2	Tile	1	1	1	0.00	0.0979		
12	2	Tile	1	1	1	6783.00	0.0549	0.0549	3.72
18	3	Tile	1	1	1	0.00	0.0549	0.0549	4.80
18	3	Tile	1	1	1	8745.00	0.0823	0.0823	9.75
24	4	Tile	1	1	1	11849.00	0.0360		
32	5	Tile	1	1	1				
38	6	Tile	1	1	1				
38	6	Tile	1	1	1				
39	6	Tile	1	1	1				
39	6	Tile	1	1	1				
40	6	Tile	1	1	1				
45	7	Tile	1	1	1				
53	8	Tile	1	1	1				
53	8	Tile	1	1	1				
70	9	Tile	1	1	1	18227.00	0.0785	0.0785	14.30
71	9	Tile	1	1	1	5811.00	0.0146	0.0146	0.85
92	10	Tile	1	1	1	16813.00	0.0351	0.0430	7.24
101	11	Tile	1	1	1		0.0510		
101	11	Tile	1	1	1	4821.00	0.0403	0.0403	1.94
111	12	Tile	1	1	1	8919.00	0.0081	0.0081	0.72
125	13	Tile	1	1	1				

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
134	14	Tile	1	1	1	12876.00	0.0524	0.0300	3.88
135	14	Tile	1	1	1	15848.00	0.0076	0.0598	18.53
136	15	Tile	1	1	1	0.00	0.0598	0.0082	
137	15	Tile	1	1	1	6302.00	0.2228	0.0825	5.20
137	15	Tile	1	1	1	0.00	0.1508	0.0534	
159	16	Tile	1	1	1	0.00	0.0432	0.0432	
159	16	Tile	1	1	1	0.00	0.0222	0.0222	0.53
159	16	Tile	1	1	1	0.00	0.0817	0.0817	
179	16	Tile	1	1	1	0.00	0.0101	0.0101	
195	17	Tile	1	1	1	0.00	0.0000	0.0000	0.47
195	17	Tile	1	1	1	0.00	0.0281	0.0281	0.91
195	17	Tile	1	1	1	0.00	0.1080	0.1080	19.29
196	17	Tile	1	1	1	0.00	0.1418	0.1418	
225	18	Tile	1	1	1	0.00	0.1203	0.1203	
225	19	Tile	1	1	1	0.00	0.0434	0.0434	
231	20	Tile	1	1	1	0.00	0.0176	0.0176	
250	21	Tile	1	1	1	8800.00	0.2572	0.1627	14.32
250	21	Tile	1	1	1	0.00	0.1574	0.1574	
250	21	Tile	1	1	1	0.00	0.1284	0.1284	
251	21	Tile	1	1	1	0.00	0.1100	0.1100	
258	22	Tile	1	1	1	0.00	0.1747	0.1747	11.70
258	22	Tile	1	1	1	0.00	0.0852	0.0852	4.69
259	23	Tile	1	1	1	0.00	0.1718	0.1718	
262	24	Tile	1	1	1	0.00	0.0412	0.0412	
262	24	Tile	1	1	1	0.00	0.0812	0.0812	

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
263	24	Tile	1	1	1	2643.00	0.0500	0.0500	1.32
263	24	Tile	1	1	1	14210.64	0.2205	0.2749	30.06
265	25	Tile	1	1	1				
4	1	Surface	2	1	1	5931.88	0.2587	0.2587	15.34
4	1	Surface	2	1	1	2489.13	0.1358	0.1358	3.38
10	2	Surface	2	1	1	3125.95	0.1694	0.1694	5.30
18	3	Surface	2	1	1				
38	4	Surface	2	1	1	3203.54	0.1734	0.1734	5.55
39	5	Surface	2	0	0				
39	5	Surface	2	1	1	17912.00	0.2012	0.1558	27.90
39	5	Surface	2	1	1				
53	6	Surface	2	1	1				
53	6	Surface	2	0	0	0.00			
58	7	Surface	2	0	0	2938.46	0.0504	0.0504	1.48
101	8	Surface	2	1	1	3423.36	0.0862	0.0862	3.29
134	9	Surface	2	1	1	4273.54	0.1599	0.1599	5.97
136	10	Surface	2	1	1				
137	10	Surface	2	1	1	1703.60	0.1326	0.1326	2.26
137	11	Surface	2	1	1	1322.15	0.1979	0.2387	3.16
159	12	Surface	2	1	1				
159	12	Surface	2	1	0	0.00			
195	13	Surface	2	1	0				
225	14	Surface	2	1	0	4186.26	0.1089	0.1089	4.56
231	15	Surface	2	1	1	5983.99	0.3169	0.2414	14.16
250	16	Surface	2	2	1				
250	16	Surface	2	1	1	0.1659			
250	17	Surface	2	1	1	5906.02	0.1316	0.0969	5.73
250	17	Surface	2	2	1				

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
258	18	Surface	2	1	1	5841.36	0.6539	0.3087	18.03
258	18	Surface	2	1	1	0.2331	0.1392		
258	18	Surface	2	1	1	6791.76	0.2942	0.2842	19.90
259	19	Surface	2	1	1	7609.61	0.1024	0.1006	7.67
262	20	Surface	2	1	1		0.0855		
262	20	Surface	2	1	1		0.1146		
265	21	Surface	2	1	1	2673.39	0.2059	0.1568	4.19
265	21	Surface	2	1	1	0.1077	0.00		
4	1	Tile	2	0	0	2126.00	0.0418	0.0418	0.89
10	2	Tile	2	1	1	0	0.00		
12	2	Tile	2	2	2	13559.00	0.0685	0.0576	11.68
18	3	Tile	2	2	2	0	0.1067		
18	3	Tile	2	2	2	6043.00	0.0876	0.0876	5.29
24	4	Tile	2	2	2	7237.00	0.0876		6.34
32	5	Tile	2	2	2	0			
38	6	Tile	2	2	2	0			
38	6	Tile	2	2	2	0			
39	6	Tile	2	2	2	0			
39	6	Tile	2	2	2	0			
40	6	Tile	2	2	2	0			
45	7	Tile	2	2	2	0			
53	8	Tile	2	2	2	0			
53	8	Tile	2	2	2	0			
70	9	Tile	2	2	2	0			
71	9	Tile	2	2	2	0			
92	10	Tile	2	2	2	0			
101	11	Tile	2	2	2	0			

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha	- 6 -	
										1	1
101	11	Tile	2	1	1	5268.00	0.0694	0.0694	3.66		
111	12	Tile	2	1	1	8718.00	0.0721	0.0721	6.29		
125	13	Tile	2	1	1	8237.00	0.0588	0.0588	2.71		
134	14	Tile	2	1	1		0.0070	0.0070			
135	14	Tile	2	1	1	11331.00	0.0615	0.0632	9.42		
136	15	Tile	2	1	1		0.0716	0.0716			
137	15	Tile	2	1	1	14459.00	0.1164	0.1009	14.59		
137	15	Tile	2	1	1		0.1198	0.1035			
159	16	Tile	2	1	1		0.0916	0.0916			
159	16	Tile	2	1	1		0.0890	0.0890			
179	16	Tile	2	1	1		0.0212	0.0315	1.53		
195	17	Tile	2	1	1		0.0675	0.0675			
195	17	Tile	2	1	1	0					
196	17	Tile	2	2	1	135.00					
225	18	Tile	2	2	0	1770.00					
225	19	Tile	2	2	1	2531.00					
231	20	Tile	2	2	1	20840.00					
250	21	Tile	2	2	1		0.1744	0.1744			
250	21	Tile	2	2	1		0.1391	0.1391			
250	21	Tile	2	2	1		0.0858	0.0858			
251	21	Tile	2	2	1		0.0751	0.0751			
258	22	Tile	2	2	1		0.2882	0.2882			
258	22	Tile	2	2	1		0.1961	0.1961			
258	22	Tile	2	2	1		0.1726	0.1726			
259	23	Tile	2	2	1		0.0598	0.0598			
							0.1514	0.1514	4.44		

Appendix 13A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
262	24	Tile	2	1	1	2975.00	0.0984	0.0910	2.71
262	24	Tile	2	1	1		0.1120		
262	24	Tile	2	1	1		0.0899		
263	24	Tile	2	1	1		0.0935		
263	24	Tile	2	0	1	1462.00	0.0698	0.0688	1.01
265	25	Tile	2	1	1				

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Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	1	1	11740.91	0.1652	0.1549	16.19
4	1	Surface	1	1	1		0.1446		
10	2	Surface	1	1	1	6074.11	0.1048	0.1048	6.36
18	3	Surface	1	0	0	0.00			
38	4	Surface	1	0	0	0.00			
39	5	Surface	1	0	0				
39	5	Surface	1	1	1	9245.32	0.1014	0.1038	9.59
39	5	Surface	1	1	1		0.1062	0.1536	28.21
53	6	Surface	1	0	0	0.00			
53	6	Surface	1	1	1	18348.41	0.1668	0.1409	
58	7	Surface	1	0	0	0.00			
101	8	Surface	1	1	1	3959.97	0.0968	0.0968	3.63
134	9	Surface	1	1	1	4855.41	0.0923	0.0923	4.48
136	10	Surface	1	1	1	6727.10	0.1053	0.1363	9.30
137	10	Surface	1	1	1	0.1712			
137	11	Surface	1	1	1	3769.25	0.1007	0.1007	3.79
159	12	Surface	1	0	0	0.00			
159	12	Surface	1	0	0				
195	13	Surface	1	0	0	0.00			
225	14	Surface	1	0	0				
231	15	Surface	1	0	0				
250	16	Surface	1	1	1	4289.70	0.0236	0.0236	1.01
250	16	Surface	1	1	1	7590.22	1.1006	0.9345	70.93
250	17	Surface	1	1	1	9720.52	0.2706	0.1825	17.74
250	17	Surface	1	1	1				
258	18	Surface	1	1	1	6238.98	1.4742	0.6737	42.03
258	18	Surface	1	1	1				
258	18	Surface	1	1	1	0.2143			

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Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	19	Surface	1	1	1	6293.93	0.5118	0.5118	3221
262	20	Surface	1	1	1	6468.49	0.2441	0.1574	10.16
262	20	Surface	1	1	1		0.1040		
262	20	Surface	1	1	1	1241.33	0.0825	0.0877	1.09
265	21	Surface	1	1	1		0.0930		
265	21	Tile	1	0	0	624.00	0.0324	0.20	
4	1	Tile	1	1	1	4957.00	0.0649	0.0649	3.22
10	2	Tile	1	1	0				
12	2	Tile	1	1	0	13052.00	0.0364	0.0683	8.85
18	3	Tile	1	1	1		0.0932		
18	3	Tile	1	1	1	5404.00	0.0828	0.0828	3.39
24	4	Tile	1	0	0	5532.00	0.0628	0.0628	3.47
32	5	Tile	1	1	0				
38	6	Tile	1	1	1	11738.00	0.0718	0.0718	8.43
38	6	Tile	1	1	1		0.0910		
39	6	Tile	1	1	1	0.0776			
39	6	Tile	1	1	1	0.0469			
40	6	Tile	1	1	0	1255.00	0.1025	0.1025	1.29
45	7	Tile	1	1	0	26871.00	0.1453	0.1025	27.54
53	8	Tile	1	1	1		0.0596		
53	8	Tile	1	1	1	20169.00	0.1025	0.1025	20.67
70	9	Tile	1	1	0				
71	9	Tile	1	1	0	0			
71	9	Tile	1	1	0	0			
92	10	Tile	1	1	1	5723.00	0.0247	0.0247	1.41
101	11	Tile	1	1	1	13866.00	0.0294	0.0397	5.50
101	11	Tile	1	1	1		0.0500		
111	12	Tile	1	1	1	4209.00	0.0600	0.0600	2.53

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
125	13	Tile	1	1	1	7829.00	0.0594	0.0594	4.65
134	14	Tile	1	1	1	9866.00	0.1026	0.0567	5.59
135	14	Tile	1	1	1	14257.00	0.0108	0.0700	9.98
136	15	Tile	1	1	1		0.0912		
137	15	Tile	1	1	1		0.0538		
137	15	Tile	1	1	1		0.0648		
159	16	Tile	1	1	1	7135.00	0.2016	0.1346	9.60
159	16	Tile	1	1	1		0.1600		
159	16	Tile	1	1	1		0.0420		
179	16	Tile	0	0	0	902.00	0.0202	0.0357	0.32
195	17	Tile	1	1	1		0.0762		
195	17	Tile	1	1	1		0.0117		
196	17	Tile	0	0	0	0.00			
225	18	Tile	1	1	1	990.00	0.1016	0.1016	1.01
225	19	Tile	1	1	1	2472.00	0.0446	0.0446	1.10
231	20	Tile	1	1	1	16113.00	0.2836	0.1511	24.34
250	21	Tile	1	1	1		0.2233		
250	21	Tile	1	1	1		0.1519		
250	21	Tile	1	1	1		0.0630		
251	21	Tile	1	1	1		0.0336		
258	22	Tile	1	1	1	8152.00	0.3835	0.2371	19.33
258	22	Tile	1	1	1		0.2535		
258	22	Tile	1	1	1		0.1966		
258	22	Tile	1	1	1		0.1147		
258	22	Tile	1	1	1		0.1954	0.1954	10.31
259	23	Tile	1	1	1		0.0831	0.0831	4.02
262	24	Tile	1	1	1		0.0694		
262	24	Tile	1	1	1				

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Sediment Conc., g/L	Sediment loss, kg/ha
262	24	Tile	1	1	1	0.0352	0.0357	0.0367	0.76
263	24	Tile	1	1	1	0.0661	0.1407	0.2555	40.20
263	24	Tile	1	1	1	0.0336	0.3703	0.1707	11.08
265	25	Tile	1	1	1	2084.00	0.0367	0.0367	0.0367
4	1	Surface	2	1	1	15733.21	0.1707	0.1707	11.08
4	1	Surface	2	1	1	6491.12	0.3992	0.3992	11.74
10	2	Surface	2	1	1	2941.69	0.1160	0.1160	4.86
18	3	Surface	2	1	1	4021.39	0.0685	0.0685	2.46
38	4	Surface	2	1	1	3620.55	0.0783	0.0783	
39	5	Surface	2	1	0	0	0.0588	0.1507	0.0857
39	5	Surface	2	1	1	19466.90	0.0206	0.0206	16.68
53	6	Surface	2	1	1	0.00	0.00	0.00	
53	6	Surface	2	0	0	5343.54	0.1104	0.1104	5.90
58	7	Surface	2	1	1	6533.15	0.0809	0.0809	5.28
101	8	Surface	2	1	1	6109.67	0.1169	0.1478	9.03
134	9	Surface	2	1	1	4144.23	0.1367	0.1367	5.67
136	10	Surface	2	1	1	2828.55	0.2274	0.2607	7.38
137	10	Surface	2	1	1	1305.98	0.3242	0.3242	4.23
137	11	Surface	2	1	1	1900.79	0.2781	0.2781	5.29
159	12	Surface	2	2	1	5094.62	0.0210	0.0210	1.07
195	13	Surface	2	1	1	5398.49	0.5575	0.4014	21.67
225	14	Surface	2	1	1	6061.18	0.2453	0.1976	11.39
231	15	Surface	2	1	1				
250	16	Surface	2	1	1				
250	16	Surface	2	1	1				
250	17	Surface	2	1	1				

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
250	17	Surface	2	1	1	0.0721	0.0721	0.5005	40.67
250	17	Surface	2	1	1	6126.83	1.0390	0.2487	
259	18	Surface	2	1	1		0.2137		
259	18	Surface	2	1	1	6345.65	0.3448	0.3448	21.88
259	19	Surface	2	1	1	8967.32	0.1227	0.1048	9.40
262	20	Surface	2	1	1		0.1062		
262	20	Surface	2	1	1	2683.08	0.0856	0.1106	2.97
262	20	Surface	2	1	1		0.1079		
265	21	Surface	2	1	0	0.00	0.1133		
265	21	Surface	2	1	0	3381.00	0.0742	0.0742	2.51
4	1	Tile	2	0	0				
10	2	Tile	2	1	0				
12	2	Tile	2	1	1				
18	3	Tile	2	1	1				
18	3	Tile	2	1	1				
24	4	Tile	2	1	0	5813.00	0.0513	0.0513	2.98
32	5	Tile	2	1	1	7033.00	0.0513	0.0513	3.61
38	6	Tile	2	1	1	13331.00	0.0684	0.0684	9.12
39	6	Tile	2	1	1				
39	6	Tile	2	1	1	0.0791	0.0453	0.0453	
40	6	Tile	2	1	0				
45	7	Tile	2	1	0				
53	8	Tile	2	1	1	3303.00	0.1100	0.1100	3.63
53	8	Tile	2	1	1	20929.00	0.1928	0.1928	23.01
70	9	Tile	2	1	0	26822.00	0.1100	0.1100	29.49
71	9	Tile	2	1	0				

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
92	10	Tile	2	1	1	5936.00	0.0444	0.0444	2.64
101	11	Tile	2	1	1	10529.00	0.0886	0.2619	27.58
101	11	Tile	2	1	1		0.4352		
111	12	Tile	2	1	1	5061.00	0.0433	0.0433	2.19
125	13	Tile	2	1	1	7163.00	0.1563	0.1563	11.19
134	14	Tile	2	1	1	5144.00	0.0351	0.0224	1.15
135	14	Tile	2	1	1		0.0097		
136	15	Tile	2	2	1	8562.00	0.0376	0.0703	6.02
137	15	Tile	2	2	1		0.1067		
137	15	Tile	2	2	1		0.0685		
159	16	Tile	2	2	1	15285.00	0.1886	0.1259	19.24
159	16	Tile	2	2	1		0.1500		
159	16	Tile	2	2	1		0.1022		
179	16	Tile	2	2	1		0.0646		
195	17	Tile	2	2	1	6879.00	0.0382	0.0514	3.53
195	17	Tile	2	2	1		0.0609		
196	17	Tile	2	2	1		0.0251		
225	18	Tile	2	2	0	0.00			
225	19	Tile	2	2	1	881.00	0.1482	0.1482	1.31
231	20	Tile	2	2	1	2874.00	0.1176	0.1176	3.38
250	21	Tile	2	2	1	14125.00	0.1542	0.1045	14.77
250	21	Tile	2	2	1		0.1706		
250	21	Tile	2	2	1		0.0981		
251	21	Tile	2	2	1		0.0745		
258	22	Tile	2	2	1	4041.00	0.2076	0.1600	6.46
258	22	Tile	2	2	1		0.1633		
258	22	Tile	2	2	1		0.1134		

Appendix 14A. Samples taken and analyzed, event volumes, sediment and orthophosphate concentrations and losses for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
258	22	Tile	2	1	1	3265.00	0.1384	0.1384	4.52
259	23	Tile	2	1	1	3002.00	0.0549	0.0581	1.74
262	24	Tile	2	1	1		0.0738		
262	24	Tile	2	1	1		0.0462		
262	24	Tile	2	1	1		0.0574		
263	24	Tile	2	1	1				
263	24	Tile	2	0	1	1236.00	0.0324	0.0324	0.40
265	25	Tile	2	1	1				

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

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Julian Date/90	Event #	Source	Rep	Taken. #	Analyzed. #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	1	1	13767.77	0.0520	0.0537	7.39
4	1	Surface	1	1	0	0.00			
10	2	Surface	1	0	0	0.00			
18	3	Surface	1	0	0	0.00			
38	4	Surface	1	0	0	0.00			
39	5	Surface	1	0	0	0.00			
39	5	Surface	1	0	0	0.00			
39	5	Surface	1	1	1	22783.58	0.1402	0.1281	28.72
53	6	Surface	1	1	1	0.1119	0.1261	0.1261	6.63
53	6	Surface	1	0	0	0.00			
58	7	Surface	1	0	0	0.00			
101	8	Surface	1	0	0	0.00			
134	9	Surface	1	0	0	0.00			
136	10	Surface	1	0	0	0.00			
137	10	Surface	1	0	0	0.00			
137	11	Surface	1	0	0	0.00			
159	12	Surface	1	0	0	0.00			
159	12	Surface	1	0	0	0.00			
195	13	Surface	1	0	0	0.00			
225	14	Surface	1	0	0	0.00			
231	15	Surface	1	0	1	5104.32	1.0009	0.6961	35.53
250	16	Surface	1	1	1	0.3914	0.2410	0.2410	14.74
250	16	Surface	1	1	1	0.2410			
250	17	Surface	1	1	1	0.5382			25.18
250	17	Surface	1	0	0	0.9589			
258	18	Surface	1	1	1	0.3814			
258	18	Surface	1	1	1	0.4677.62			

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
258	18	Surface	1	1	1	4254.14	0.6540	27.82	
259	19	Surface	1	1	1	4412.54	0.2284	8.29	
262	20	Surface	1	1	1		0.1823		
262	20	Surface	1	1	1		0.1529		
262	20	Surface	1	0	0	0.00			
265	21	Surface	1	0	0	525.00	0.0149	0.0074	0.04
265	21	Tile	1	0	0	3658.00	0.0149	0.0149	0.57
4	1	Tile	1	1	0				
10	2	Tile	1	1	0	25372.00	0.0236	0.0373	9.46
12	2	Tile	1	1	1				
18	3	Tile	1	1	1	0.0510	0.0609	5.82	
18	3	Tile	1	1	1	9560.00	0.0609	0.0609	6.72
18	4	Tile	1	1	0	11042.00	0.0609	0.0609	10.61
24	4	Tile	1	1	0	17419.00	0.1254		
32	5	Tile	1	1	0				
38	6	Tile	1	1	1	0.0361			
38	6	Tile	1	1	1	0.0461			
39	6	Tile	1	1	1	0.0360			
39	6	Tile	1	1	1	0.0593			
40	6	Tile	1	1	0	0.1268			
45	7	Tile	1	1	0				
53	8	Tile	1	1	0				
53	8	Tile	1	1	0				
70	9	Tile	1	1	0				
71	9	Tile	1	1	0				
71	9	Tile	1	1	0				
92	10	Tile	1	1	0				
101	11	Tile	1	1	0				

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

- 2 -

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
258	18	Surface	1	1	1	4254.14	0.2743	0.6540	27.82
259	19	Surface	1	1	1	4412.54	0.2284	0.1879	8.29
262	20	Surface	1	1	1	0	0.1823		
262	20	Surface	1	1	1	0	0.1529		
262	21	Surface	1	0	0	0.00			
265	21	Surface	1	0	0	525.00		0.0074	0.04
4	1	Tile	1	0	1	3858.00	0.0149	0.0149	0.57
10	2	Tile	1	1	1	0			
12	2	Tile	1	1	1	0			
12	3	Tile	1	1	1	25372.00	0.0236	0.0373	9.46
16	3	Tile	1	1	1	0			
18	3	Tile	1	1	1	0			
18	4	Tile	1	1	1	8560.00	0.0610	0.0609	5.82
24	4	Tile	1	1	1	0			
32	5	Tile	1	1	1	11042.00	0.0609	0.0609	6.72
38	6	Tile	1	1	1	0			
38	6	Tile	1	1	1	17419.00	0.0609	0.0609	10.61
39	6	Tile	1	1	1	0			
39	6	Tile	1	1	1	0			
39	6	Tile	1	1	1	0			
40	6	Tile	1	1	1	0			
45	7	Tile	1	1	1	0			
53	8	Tile	1	1	1	0			
53	8	Tile	1	1	1	0			
70	9	Tile	1	1	1	0			
71	9	Tile	1	1	1	0			
71	9	Tile	1	1	1	0			
92	10	Tile	1	1	1	0			
101	11	Tile	1	1	1	0			

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

- 3

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
101	11	Tile	1	1	1	7104.00	0.0598	0.0598	6.32
111	12	Tile	1	1	1	12494.00	0.0889	0.0889	15.14
125	13	Tile	1	1	1	17945.00	0.1212	0.1212	13.83
134	14	Tile	1	1	1	33715.00	0.0394	0.0394	23.96
135	14	Tile	1	1	1	1	0.0460	0.0711	
136	15	Tile	1	1	1	1	0.0904		
137	15	Tile	1	1	1	1	0.0768	0.0730	2.58
137	15	Tile	1	1	1	3540.00	0.0998	0.0998	
159	16	Tile	1	1	1	1	0.0530		
159	16	Tile	1	1	1	1	0.0662		
179	16	Tile	1	0	0	2743.00	0.0088	0.0220	0.60
195	17	Tile	1	1	1	1	0.0513		
195	17	Tile	1	1	1	1	0.0058		
196	17	Tile	1	1	1	0	109.00	0.0918	0.10
225	18	Tile	1	1	1	1	1197.00	0.0918	1.09
225	19	Tile	1	1	1	1	2828.00	0.0472	1.33
231	20	Tile	1	1	1	1	34342.00	0.3950	49.78
250	21	Tile	1	1	1	1	0.1874		
250	21	Tile	1	1	1	1	0.0909		
250	21	Tile	1	1	1	1	0.0368		
250	21	Tile	1	1	1	1	0.0146		
251	21	Tile	1	1	1	1	0.2814	0.1775	25.66
258	22	Tile	1	1	1	1	0.1795		
258	22	Tile	1	1	1	1	0.1459		
258	22	Tile	1	1	1	1	0.1031		

Appendix 15A.

Samples taken and analyzed, event volumes; sediment concentrations and losses for conventional tillage, 1990.

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	23	Tile	1	1	1	11953.00	0.1678	0.1678	20.06
262	24	Tile	1	1	1	10541.00	0.0828	0.0822	8.66
262	24	Tile	1	1	1		0.0814		
262	24	Tile	1	1	1		0.0993		
263	24	Tile	1	1	1		0.0629		
263	24	Tile	1	1	1		0.0744		
265	25	Tile	1	1	1	4731.00	0.0348	0.0348	1.64
4	1	Surface	2	1	1	15406.71	0.1061	0.2717	41.87
4	1	Surface	2	1	1		0.4374		
10	2	Surface	2	0	0	0.00			
18	3	Surface	2	1	1	2201.42	0.2779	0.2779	6.12
38	4	Surface	2	1	1	2353.35	0.0762	0.0762	1.79
39	5	Surface	2	1	1	2013.93	0.0556	0.0556	1.11
39	5	Surface	2	0	0				
39	5	Surface	2	1	1		0.0544		
53	6	Surface	2	1	1	22256.66	0.1673	0.1912	42.55
53	6	Surface	2	1	1		0.2151		
58	7	Surface	2	0	0	0.00			
101	8	Surface	2	1	1	3895.32	0.0640	0.0640	2.49
134	9	Surface	2	1	1	5944.81	0.1606	0.1606	9.55
136	10	Surface	2	2	1	5925.41	0.1391	0.1817	10.77
137	10	Surface	2	1	1		0.2243		
137	11	Surface	2	1	1		0.2604	0.2604	8.75
159	12	Surface	2	1	1	921.30	0.3627	0.3627	3.53
159	12	Surface	2	0	0				
195	13	Surface	2	1	0	0.00			
225	14	Surface	2	1	0	0.00			

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Sediment Conc., g/L	Sediment loss, kg/ha
231	15	Surface	2	1	1	2721.87	0.0173	0.0173	0.47
250	16	Surface	2	1	1	5243.33	0.7146	0.5905	30.44
250	16	Surface	2	1	1	5802.57	0.2804	0.1847	10.72
250	17	Surface	2	1	1	5201.30	1.0101	0.9032	47.08
258	18	Surface	2	1	1	6633.36	0.4546	0.2717	42.53
258	18	Surface	2	1	1	5556.89	0.6412	0.1780	9.94
259	19	Surface	2	1	1	6633.36	0.2335	0.1546	
262	20	Surface	2	1	1	5556.89	0.1487	0.1487	
262	20	Surface	2	1	1	1984.83	0.1128	0.1271	2.38
265	21	Surface	2	1	1	730.00	0.0103	0.0206	
265	21	Tile	2	0	0	4501.00	0.0206	0.0206	
4	1	Tile	2	1	1	15256.00	0.1602	0.1602	27.50
10	2	Tile	2	1	1	0	0.2538	0.0395	
12	2	Tile	2	1	1	0	0.0395	0.0395	
18	3	Tile	2	1	1	8957.00	0.7666.00	0.0457	
18	3	Tile	2	1	1	0	18335.00	0.0441	
24	4	Tile	2	1	1	0	0.0769	0.0316	
32	5	Tile	2	1	1	0	0	0.0457	
38	6	Tile	2	1	1	0	0	0.0441	
39	6	Tile	2	1	1	0	0	0	
39	6	Tile	2	1	1	0	0	0	
40	6	Tile	2	1	1	0	0	0	
45	7	Tile	2	0	0	7550.00	0.1441	0.1441	10.88

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
53	8	Tile	2	1	1	15497.00	0.0312	0.1441	22.33
53	8	Tile	2	1	1	26640.00	0.2570	0.1441	38.39
70	9	Tile	2	0	0				
71	9	Tile	2	1	0				
92	10	Tile	2	1	1	4570.00	0.0626	0.0626	2.86
101	11	Tile	2	1	1	10314.00	0.0725	0.0872	8.99
101	11	Tile	2	1	1		0.1019		
111	12	Tile	2	1	1	4339.00	0.0822	0.0822	3.57
125	13	Tile	2	1	1	7175.00	0.0613	0.0613	3.68
134	14	Tile	2	1	1	8251.00	0.1700	0.1061	8.76
135	14	Tile	2	1	1		0.0423		
136	15	Tile	2	2	1	15879.00	0.1827	0.1747	27.74
137	15	Tile	2	2	1		0.1554		
137	15	Tile	2	2	1		0.1861		
159	16	Tile	2	2	1	4154.00	0.0527	0.0516	2.14
159	16	Tile	2	2	1		0.0598		
159	16	Tile	2	2	1		0.0424		
179	16	Tile	2	2	0				
195	17	Tile	2	2	1	3653.00	0.0650	0.0468	1.71
195	17	Tile	2	2	1		0.0678		
196	17	Tile	2	2	1		0.0076		
225	18	Tile	2	2	1	261.00	0.1761	0.1761	0.46
225	19	Tile	2	2	1	2303.00	0.1761	0.1761	4.06
231	20	Tile	2	2	1	3161.00	0.1256	0.1256	3.97
250	21	Tile	2	2	1	26348.00	0.0106	0.0106	31.52
250	21	Tile	2	2	1		0.2748		
250	21	Tile	2	2	1		0.1716		

Appendix 15A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for conventional tillage, 1990.

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Julian Date/90	Event #	Source	Rep	Taken #	Analyzed #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
250	21	Tile	2	1	1		0.0720		
251	21	Tile	2	1	1	5887.00	0.0693	0.2139	12.69
258	22	Tile	2	1	1		0.3123		
258	22	Tile	2	1	1		0.2503		
258	22	Tile	2	1	1		0.2548	0.2551	9.57
258	22	Tile	2	1	1	3753.00	0.1104	0.0997	3.67
259	23	Tile	2	1	1	3887.00			
262	24	Tile	2	1	1		0.0226		
262	24	Tile	2	1	1		0.1046		
262	24	Tile	2	1	1		0.1290		
263	24	Tile	2	1	1		0.1327		
263	24	Tile	2	1	1	2547.00	0.1552	0.1552	3.95
265	25	Tile	2	1					

Appendix 16A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
4	1	Surface	1	0	0	0	0.00	0.00	
4	1	Surface	1	0	0	0	0.00	0.00	
10	2	Surface	1	0	0	0	0.00	0.00	
18	3	Surface	1	0	0	0	0.00	0.00	
38	4	Surface	1	0	0	0	0.00	0.00	
39	5	Surface	1	0	0	0	0.00	0.00	
39	5	Surface	1	0	0	0	0.00	0.00	
39	5	Surface	1	0	0	0	0.00	0.00	
53	6	Surface	1	1	1	0	0.00	0.00	
53	6	Surface	1	1	1	0	0.00	0.00	
58	7	Surface	1	0	0	0	0.00	0.00	
101	8	Surface	1	0	0	0	0.00	0.00	
134	9	Surface	1	0	0	0	0.00	0.00	
136	10	Surface	1	0	0	0	0.00	0.00	
137	10	Surface	1	0	0	0	0.00	0.00	
137	11	Surface	1	0	0	0	0.00	0.00	
159	12	Surface	1	0	0	0	0.00	0.00	
159	12	Surface	1	0	0	0	0.00	0.00	
195	13	Surface	1	0	0	0	0.00	0.00	
225	14	Surface	1	0	0	0	0.00	0.00	
231	15	Surface	1	0	0	0	0.00	0.00	
250	16	Surface	1	0	0	0	0.00	0.00	
250	16	Surface	1	0	0	0	0.00	0.00	
250	17	Surface	1	0	0	0	0.00	0.00	
250	17	Surface	1	0	0	0	0.00	0.00	
258	18	Surface	1	0	0	0	0.00	0.00	
258	18	Surface	1	0	0	0	0.00	0.00	
258	18	Surface	1	0	0	0	0.00	0.00	

Appendix 16A

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
259	19	Surface	1	0	0	0.00	0.00	0.00	-2
262	20	Surface	1	0	0	0.00	0.00	0.00	0.44
262	20	Surface	1	0	0	0.00	0.00	0.00	0.12
262	20	Surface	1	0	0	0.00	0.00	0.00	0.00
265	21	Surface	1	0	0	3030.00	0.0146	0.0146	0.44
265	21	Surface	1	1	1	373.00	0.0332	0.0332	0.12
4	1	Tile	1	1	1	7024.00	0.0154	0.0217	1.63
10	2	Tile	1	1	1	7024.00	0.0280	0.0450	0.50
12	2	Tile	1	1	1	1111.00	0.0450	0.0450	1.91
18	3	Tile	1	1	1	4231.00	0.0278	0.0278	0.00
18	3	Tile	1	0	0	5959.00	0.0090	0.0180	1.07
24	4	Tile	1	1	1	8137.00	0.0173	0.0173	0.00
32	5	Tile	1	1	1	627.00	0.0422	0.0422	0.26
38	6	Tile	1	1	1	53980.00	0.0350	0.0422	22.76
38	6	Tile	1	1	1	8137.00	0.0493	0.0103	0.84
39	6	Tile	1	1	1	2601.00	0.0103	0.0103	0.29
39	6	Tile	1	1	1	14630.00	0.0444	0.0367	5.36
40	6	Tile	1	1	1	2090.00	0.0307	0.0307	0.64
45	7	Tile	1	1	1	111	1	1	1
53	8	Tile	1	1	1	1	1	1	1
53	8	Tile	1	1	1	1	1	1	1
70	9	Tile	1	1	1	1	1	1	1
71	9	Tile	1	1	1	1	1	1	1
71	9	Tile	1	1	1	1	1	1	1
92	10	Tile	1	1	1	1	1	1	1
101	11	Tile	1	1	1	1	1	1	1
101	11	Tile	1	1	1	1	1	1	1
	12	Tile							

Appendix 16A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
125	13	Tile	1	0	0	127.00	0.0133	0.02	
134	14	Tile	1	1	1	1626.00	0.0192	0.0133	0.24
135	14	Tile	1	1	1		0.0073		
136	15	Tile	1	1	1	11942.00	0.0170	0.0391	4.67
137	15	Tile	1	1	1		0.0466		
137	15	Tile	1	1	1		0.0636		
159	16	Tile	1	0	0	28.00	0.0391	0.0402	0.01
159	16	Tile	1	0	0				
159	16	Tile	1	0	0				
179	16	Tile	1	0	0	0.00			
195	17	Tile	1	0	0				
195	17	Tile	1	0	0				
196	17	Tile	1	0	0				
225	18	Tile	1	0	0	0.00			
225	19	Tile	1	0	0	0.00			
231	20	Tile	1	1	1	1639.00	0.0402	0.0402	0.66
250	21	Tile	1	1	1	43500.00	0.0057	0.0111	4.83
250	21	Tile	1	1	1		0.0060		
250	21	Tile	1	1	1		0.0190		
251	21	Tile	1	1	1		0.0162		
258	22	Tile	1	1	1	21276.00	0.0233	0.0292	6.21
258	22	Tile	1	1	1		0.0270		
258	22	Tile	1	1	1		0.0349		
258	22	Tile	1	1	1		0.0316		
259	23	Tile	1	1	1	13493.00	0.0230	0.0230	3.10
262	24	Tile	1	1	1	11266.00	0.0436	0.0673	7.58
262	24	Tile	1	1	1		0.1626		

Appendix 16A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
262	24	Tile	1	1	1		0.0524		
263	24	Tile	1	1	1		0.0418		
263	24	Tile	1	1	1		0.0358		
265	25	Tile	1	1	1	2007.00	0.0202	0.0202	0.41
4	1	Surface	2	1	1	7079.00	0.0057	0.0040	0.28
4	1	Surface	2	1	1	0	0.00		
10	2	Surface	2	0	0	0	0.00		
18	3	Surface	2	0	0	0	0.00		
38	4	Surface	2	0	0	0	0.00		
39	5	Surface	2	0	0	0	0.00		
39	5	Surface	2	0	0	0	0.00		
39	5	Surface	2	0	0	0	0.00		
53	6	Surface	2	1	1	10315.32	0.0126	0.0449	4.63
53	6	Surface	2	1	1	0	0.0772		
58	7	Surface	2	0	0	0	0.00		
101	8	Surface	2	0	0	0	0.00		
134	9	Surface	2	0	0	0	0.00		
136	10	Surface	2	0	0	0	0.00		
137	10	Surface	2	0	0	0	0.00		
137	11	Surface	2	0	0	0	0.00		
159	12	Surface	2	0	0	0	0.00		
159	12	Surface	2	0	0	0	0.00		
195	13	Surface	2	2	2	0	0.00		
225	14	Surface	2	2	2	0	0.00		
231	15	Surface	2	2	2	0	0.00		
250	16	Surface	2	2	2	0	0.00		
250	16	Surface	2	2	2	0	0.00		
250	17	Surface	2	2	2	0	0.00		

Appendix 16A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
250	17	Surface	2	0	0	1735.62	0.0617	0.0458	0.79
258	18	Surface	2	1	1		0.0298		
258	18	Surface	2	1	0				
258	18	Surface	2	0	0	0.00			
259	19	Surface	2	0	0				
262	20	Surface	2	0	0				
262	20	Surface	2	1	1	1053.84	0.0765	0.0765	0.81
262	20	Surface	2	0	0				
265	21	Surface	2	0	0	0.00			
265	21	Surface	2	0	0				
4	1	Tile	2	2	1	1	6030.00	0.0119	0.0119
10	2	Tile	2	2	1	1	2776.00	0.0234	0.0234
12	2	Tile	2	1	0				
18	3	Tile	2	1	1	6516.00	0.0303	0.0675	0.85
18	3	Tile	2	1	1				
24	4	Tile	2	2	1	6516.00	0.1046		
32	5	Tile	2	2	1				
38	6	Tile	2	2	0	3089.00	0.0606	0.0606	1.87
38	6	Tile	2	2	0	5885.00	0.0606	0.0606	3.57
39	6	Tile	2	2	1	10999.00	0.0500	0.0500	6.67
39	6	Tile	2	2	1				
40	6	Tile	2	2	0	0.0294			
45	7	Tile	2	2	1	0.0782			
53	8	Tile	2	2	1	0.0848			
53	8	Tile	2	2	1				
70	9	Tile	2	2	0				
71	9	Tile	2	2	0				
92	10	Tile	2	1	1				

Appendix 16A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

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Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
101	11	Tile	2	1	1	14585.00	0.0486	0.0492	7.18
101	11	Tile	2	1	1	2891.00	0.0871	0.0871	2.62
111	12	Tile	2	1	1	1221.00	0.0245	0.0245	0.30
125	13	Tile	2	1	1	1808.00	0.0389	0.0263	0.46
134	14	Tile	2	1	1	1	0.0138		
135	14	Tile	2	1	1	12143.00	0.0517	0.0538	6.53
136	15	Tile	2	1	1	1	0.0529		
137	15	Tile	2	2	1	1	0.0568		
137	15	Tile	2	2	1	1	0.0329	0.0329	0.18
159	16	Tile	2	2	1	1	0		
159	16	Tile	2	2	0	0			
159	16	Tile	2	2	0	0			
179	16	Tile	2	2	0	0			
195	17	Tile	2	2	0	0			
195	17	Tile	2	2	0	0			
196	17	Tile	2	2	0	0			
225	18	Tile	2	2	0	0			
225	19	Tile	2	2	1	1	1536.00	0.1446	2.22
231	20	Tile	2	2	1	1	2099.00	0.1333	2.80
250	21	Tile	2	2	1	1	80071.00	0.1699	37.42
250	21	Tile	2	2	1	1	1	0.0507	
250	21	Tile	2	2	1	1	1	0.0041	
250	21	Tile	2	2	1	1	1	0.0078	
250	21	Tile	2	2	1	1	1	0.0209	
250	21	Tile	2	2	1	1	1	0.0260	
251	21	Tile	2	2	1	1	1	0.0477	
258	22	Tile	2	2	1	1	1	0.0470	0.0362
258	22	Tile	2	2	1	1	1	0.0373	6.16

Appendix 16A.

Samples taken and analyzed, event volumes, sediment concentrations and losses for the sod treatment, 1990

Julian Date/90	Event #	Source	Rep	Taken, #	Analyzed, #	Event Volume, L/plot	Sediment Conc., g/L	Event Sediment Conc., g/L	Sediment loss, kg/ha
258	22	Tile	2	1	1		0.0260		
258	22	Tile	2	1	1	11262.00	0.0343	0.0835	9.40
259	23	Tile	2	1	1	10806.00	0.0609	0.0835	9.02
262	24	Tile	2	1	1		0.1573		
262	24	Tile	2	1	1		0.0728		
262	24	Tile	2	1	1		0.0644		
263	24	Tile	2	1	1		0.0620		
265	25	Tile	2	1	1	2294.00	0.0757	0.0757	1.74

Appendix 17A. Sample and event concentration for ortho P, soluble P and sediment P* for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1	0.4150	0.7350	0.0260	0.4645	0.6525	0.0205	
4	1	Surface	1	0.5140	0.5700	0.0150	0.0850			
10	2	Surface	1	0.4100	0.3950	0.1800	0.4100	0.3950	0.1800	
18	3	Surface	1							
38	4	Surface	1							
39	5	Surface	1	0.4200	0.1300	0.1200	0.4800	0.1700	0.1025	
39	5	Surface	1	0.5400	0.2100	0.0850				
52	6	Surface	1	0.4750	0.2650	0.1850	0.3510	0.2535	0.1180	
53	6	Surface	1	0.2270	0.2420	0.0510				
58	7	Surface	1							
101	8	Surface	1	0.3150	0.3940	0.1300	0.3150	0.3940	0.1300	
134	9	Surface	1							
136	10	Surface	1	0.1450	0.3510	0.0300	0.3200	0.3900	0.1300	
137	10	Surface	1	0.5410	0.5110	0.0150	0.3430	0.4310	0.0225	
137	11	Surface	1	0.3600	0.1820	0.0600	0.3600	0.1820	0.0600	
159	12	Surface	1							
159	12	Surface	1							
195	13	Surface	1							
225	14	Surface	1							
231	15	Surface	1							
250	16	Surface	1	0.4250	0.5750	0.7540	0.4715	0.6010	0.8170	
250	16	Surface	1	0.5180	0.6270	0.8800				
250	17	Surface	1	0.6520	0.6780	0.5100	0.6520	0.6780	0.5100	
250	17	Surface	1							
258	18	Surface	1	0.4950	0.6020	0.4000	0.3233	0.6267	0.3267	
258	18	Surface	1	0.2500	0.8000	0.5010				
258	18	Surface	1	0.2250	0.4780	0.0790				

Appendix 17A. Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P.	Soluble P.	Sediment P.	Event Ortho P.	Event Soluble P.	Event Sediment P.
				Conc., mg/L	Conc., mg/L	Conc., mg/L	Conc., mg/L	Conc., mg/L	Conc., mg/L
259	19	Surface	1	0.5150	0.4000	0.5610	0.5150	0.4000	0.5610
262	20	Surface	1	0.4240	0.5100	0.6410	0.4783	0.5940	0.3077
262	20	Surface	1	0.4860	0.5220	0.2220			
262	20	Surface	1	0.5250	0.6900	0.0600			
265	21	Surface	1	0.7700	0.8500	0.0550	0.7700	0.8500	0.0550
265	21	Surface	1						
4	1	Tile	1						
10	2	Tile	1						
12	2	Tile	1						
18	3	Tile	1	0.1100	0.1910	0.0540	0.1000	0.1405	0.0595
18	3	Tile	1	0.0900	0.0900	0.0650			
24	4	Tile	1						
32	5	Tile	1						
39	6	Tile	1						
39	6	Tile	1	0.0750	0.1400	0.3850			
39	6	Tile	1	0.1490	0.2160	0.0450			
40	6	Tile	1						
45	7	Tile	1						
53	8	Tile	1	0.0750	0.1610	0.1600	0.2900	0.2705	0.0975
53	8	Tile	1	0.5050	0.3800	0.0350	0.2900	0.2705	0.0975
70	9	Tile	1						
71	9	Tile	1	0.2900	0.2705	0.0975	0.2800	0.2705	0.0975
92	10	Tile	1	0.0360	0.1060	5.0000	0.0360	0.1060	5.0000
101	11	Tile	1	0.3510	0.4400	0.3400	0.2285	0.2925	0.1900
101	11	Tile	1	0.1060	0.1450	0.0400			
111	12	Tile	1	0.0550	0.1100	0.0950	0.0550	0.1100	0.0950
111	12	Tile	1	0.1110	0.1460	0.0310	0.1100	0.1460	0.0310
125	13	Tile	1						

Appendix 17A. Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L	
									Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L
134	14	Tile	1	0.4110	0.7000	0.0350	0.2255	0.3875	0.4800	
135	14	Tile	1	0.0400	0.0750	0.9450	0.2887	0.3333	1.7533	
136	15	Tile	1	0.2510	0.02490	0.0250	5.0600	0.1750	0.0350	
137	15	Tile	1	0.4300	0.4350	0.3160	0.0350	0.7533	9.5087	0.0350
137	15	Tile	1	0.1850	9.4500	10.0000	0.0600	0.0100	4.0200	0.0913
159	16	Tile	1	7.7100	9.1200	0.0350	0.0550	0.0790	0.1197	2.3850
159	16	Tile	1	9.1000	9.4000	0.0200	0.0200	0.0200	4.8100	0.1320
159	16	Tile	1	0.1120	0.1120	0.1010	2.6100	0.1340	4.2000	0.1316
179	16	Tile	1	0.1100	0.1600	0.1920	0.2402	0.0600	0.2128	
195	17	Tile	1	0.0520	0.0520	0.0550	0.0550	0.0550	0.1010	0.1010
195	17	Tile	1	0.1100	0.1100	0.1100	0.1100	0.1100	2.6100	2.6100
196	17	Tile	1	0.0520	0.0520	0.0550	0.0550	0.0550	0.2128	0.2128
225	18	Tile	1	0.1320	4.8100	0.4500	0.4500	0.4500	0.2748	
225	19	Tile	1	0.1340	4.2000	0.4120	0.4120	0.4120	0.3910	
231	20	Tile	1	0.2650	0.3940	0.3950	0.3950	0.3950	0.3990	
250	21	Tile	1	0.3000	0.2700	0.2720	0.2720	0.2720	0.3918	
250	21	Tile	1	0.3280	0.4170	0.4500	0.4500	0.4500	0.5617	
250	21	Tile	1	0.2280	0.2500	0.2550	0.2550	0.2550	0.9700	
250	21	Tile	1	0.0800	0.1770	0.5550	0.5550	0.5550	1.0000	
251	21	Tile	1	0.2800	0.3850	0.5400	0.5400	0.5400	0.9700	
253	22	Tile	1	0.3880	0.4120	0.1100	0.1100	0.1100	0.9700	
253	22	Tile	1	0.3860	0.3950	0.3640	0.3640	0.3640	0.9700	
253	22	Tile	1	0.3490	0.3720	0.0850	0.0850	0.0850	0.9700	
253	22	Tile	1	0.2750	0.3860	0.1250	0.1250	0.1250	0.9700	
259	23	Tile	1	0.2750	0.3500	0.6585	0.6585	0.6585	0.9700	
262	24	Tile	1	3.3000	0.4950	0.9700	0.9700	0.9700	0.9700	
262	24	Tile	1	0.9700	0.3900	1.0000	1.0000	1.0000	0.9700	

Appendix 17A. Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
263	24	Tile	1	0.2860	0.3470	0.0100			
263	24	Tile	1	0.2600	0.3770	0.1700			
265	25	Tile	1	0.1870	0.2220	0.0620	0.1870	0.2220	0.0620
4	1	Surface	2	0.4050	0.4450	0.0300	0.2225	0.2575	0.0220
4	1	Surface	2	0.0400	0.0700	0.0140			
10	2	Surface	2	0.2700	0.3170	0.1720	0.2700	0.3170	0.1720
18	3	Surface	2	0.0310	0.0750	0.0150	0.0310	0.0750	0.0150
38	4	Surface	2	0.0720	0.1900	0.0710	0.0720	0.1900	0.0710
39	5	Surface	2	0.1700	0.1000	0.2410	0.2010	0.0900	0.1255
39	5	Surface	2	0.2320	0.0800	0.0100			
53	6	Surface	2	0.1920	0.1250	0.2900	0.1655	0.1505	0.2275
53	6	Surface	2	0.1390	0.1760	0.1650			
58	7	Surface	2						
101	8	Surface	2	0.0360	0.6050	0.0150	0.0360	0.6050	0.0150
134	9	Surface	2	0.4850	0.5900	0.0650	0.4850	0.5900	0.0650
136	10	Surface	2	0.2910	0.5010	0.0160	0.2880	0.4305	0.0580
137	10	Surface	2	0.2850	0.3600	0.1000			
137	11	Surface	2	0.2190	0.2750	0.1010	0.2190	0.2750	0.1010
159	12	Surface	2	2.6500	9.6000	0.2150	1.8750	9.4750	0.2175
159	12	Surface	2	1.1000	9.3600	0.2200			
195	13	Surface	2				0.0000	0.0000	0.0000
225	14	Surface	2				0.0000	0.0000	0.0000
231	15	Surface	2				4.6500	0.1300	3.3000
250	16	Surface	2	0.1300	3.3000				
250	16	Surface	2	0.3370	0.4650	0.6800	0.4135	0.5220	0.7390
250	17	Surface	2	0.4900	0.5790	0.7980			
250	17	Surface	2	0.5660	0.7780	0.3250	0.6005	0.7265	0.2995
250	17	Surface	2	0.6350	0.6750	0.2740			

Appendix 17A. Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
258	18	Surface	2	0.0800	0.4480	0.4000	0.4017	0.6493	0.5153
258	18	Surface	2	0.5500	0.7950	0.6500	0.4960	0.4500	0.6010
258	18	Surface	2	0.5750	0.7050	0.6010	0.3720	0.5497	0.4859
259	19	Surface	2	0.3720	0.4500	0.4160	0.4160	0.4510	
262	20	Surface	2	0.4230	0.4860	0.5850	0.5430	0.3968	0.1450
262	20	Surface	2	0.4300	0.5000	0.6200	0.5000	0.4900	0.1450
265	21	Surface	2	0.3600	0.4150	0.2800	0.6200	0.0100	
265	21	Surface	2	0.450	0.0660	0.0400	0.0450	0.0860	0.0400
4	1	Tile	2	0.0800	0.1210	0.3060	0.2030	0.2860	0.1840
10	2	Tile	2	0.3260	0.4510	0.0620	0.2030	0.2860	0.1840
12	2	Tile	2	0.2100	0.1850	0.0320	0.1300	0.2100	0.0680
18	3	Tile	2	0.1250	0.2600	0.0560	0.1100		
18	3	Tile	2	0.0550	0.1850				
24	4	Tile	2	0.2100	0.1850	0.0320	0.1300	0.2100	0.0680
32	5	Tile	2	0.0800	0.1210	0.2030	0.2030	0.2860	0.1840
38	6	Tile	2	0.0550	0.1850	0.0320	0.1300	0.2100	0.0680
38	6	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
39	6	Tile	2	0.8540	0.6420	0.4700	0.5730	0.4640	0.2505
40	6	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
45	7	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
53	8	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
53	8	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
70	9	Tile	2	0.2920	0.2860	0.0310	0.5730	0.4640	0.2505
71	9	Tile	2	0.0590	0.1000	0.0590	0.1000	0.1000	0.5410
92	10	Tile	2	0.5160	0.6780	0.0350	0.3335	0.4195	0.1000
101	11	Tile	2						

Appendix 17A Sample and event concentration for ortho P, soluble P and sediment P^a for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
101	11	Tile	2	0.1510	0.1610	0.1650	0.0950	0.2350	0.1210
111	12	Tile	2	0.0950	0.2350	0.1210	0.0300	0.1420	0.1920
125	13	Tile	2	0.1420	0.1920	0.0300	0.2450	0.2235	0.0300
134	14	Tile	2	0.4300	0.4400	0.2450	0.1000	4.0100	2.1275
135	14	Tile	2	0.0350	0.0350	0.2450	0.4000	0.5810	2.9500
136	15	Tile	2	0.4000	0.4300	0.5000	0.4300	4.0100	0.3853
137	15	Tile	2	0.3260	0.4410	0.0350	10.0000	0.0600	0.5073
137	15	Tile	2	0.1100	0.1100	0.0250	10.0000	0.0600	2.3317
159	16	Tile	2	0.7200	9.7000	0.1050	0.0710	0.0900	0.0613
159	16	Tile	2	0.1100	0.1900	0.1170	0.2270	0.2460	7.2075
159	16	Tile	2	0.1100	0.1100	0.0410	0.1340	0.1700	7.4725
179	16	Tile	2	0.0710	0.0710	0.1170	0.02270	0.0410	0.0613
195	17	Tile	2	0.2270	0.2270	0.0410	0.1340	0.1700	1.7327
195	17	Tile	2	0.1100	0.1100	0.0400	0.1340	0.1700	0.0400
196	17	Tile	2	0.0710	0.0710	0.1170	0.1170	0.1170	0.1170
225	18	Tile	2	0.1410	4.0000	0.1410	0.3700	4.3100	0.1410
225	19	Tile	2	0.1810	4.3100	0.1410	0.4950	0.6350	4.5200
231	20	Tile	2	0.4950	0.6350	0.1810	0.4050	0.6000	4.3100
250	21	Tile	2	0.4650	0.6930	0.6690	0.4660	0.5240	0.5576
250	21	Tile	2	0.4650	0.5900	0.6250	0.4990	0.5240	0.6250
250	21	Tile	2	0.1900	0.5240	0.5220	0.5240	0.3700	0.5220
251	21	Tile	2	0.2700	0.6050	0.1000	0.4660	0.7200	0.1000
258	22	Tile	2	0.7700	0.4600	0.0750	0.5200	0.2850	0.0750
258	22	Tile	2	0.4990	0.5240	0.2850	0.4060	0.2000	0.4340
258	22	Tile	2	0.5200	0.6050	0.3700	0.3460	0.4320	0.3460
259	23	Tile	2	0.4060	0.2000	0.6170	0.3460	0.4320	0.6170
									0.4320
									0.6170

Appendix 17A. Sample and event concentration for ortho P, soluble P and sediment P* for zero tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
262	24	Tile	2	0.9700	0.6300	0.6856	0.6183	0.5958	0.4289
262	24	Tile	2	0.5040	0.5400	1.0000			
262	24	Tile	2	0.5320	0.7130	0.0100			
262	24	Tile	2	0.4670	0.5000	0.0200			
263	24	Tile	2						
263	24	Tile	2	0.4430	0.6200	0.0350	0.4430	0.6200	0.0350
265	25	Tile	2						

- Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1	0.2120	0.3200	0.0320	0.2555	0.3170	0.0240
4	1	Surface	1	0.2990	0.3140	0.0160			
10	2	Surface	1	0.2250	0.2000	0.0200	0.2250	0.2000	0.0200
18	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1	0.1350	0.1750	0.0150	0.1685	0.3630	0.0825
39	5	Surface	1	0.2020	0.5510	0.1500			
53	6	Surface	1	0.4350	0.4720	0.2950	0.3530	0.2865	0.2700
53	6	Surface	1	0.2710	0.1210	0.2450			
58	7	Surface	1						
101	8	Surface	1	0.2700	0.4500	0.0750	0.2700	0.4500	0.0750
134	9	Surface	1	0.2800	0.2410	0.0350	0.2800	0.2410	0.0350
136	10	Surface	1	0.3750	0.1900	0.0400	0.2705	0.1495	0.0275
137	10	Surface	1	0.1660	0.1090	0.0150			
137	11	Surface	1	0.1110	0.1660	0.0400	0.1110	0.1660	0.0400
159	12	Surface	1						
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1						
231	15	Surface	1	0.1410	5.5500	2.9500	0.1410	5.5500	2.9500
250	16	Surface	1	0.2200	0.4000	0.4550	0.2425	0.3420	0.5285
250	16	Surface	1	0.2650	0.2840	0.6020			
250	17	Surface	1	0.3160	0.5300	0.7230	0.3000	0.4200	0.6800
250	17	Surface	1	0.2840	0.3100	0.6370			
258	18	Surface	1	0.1000	0.2300	0.4750	0.3333	0.4817	0.5233
258	18	Surface	1	0.3000	0.4480	0.7550			
258	18	Surface	1	0.6000	0.7670	0.3400			

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	19	Surface	1	0.2180	0.2750	0.5760	0.2180	0.2750	0.5760
262	20	Surface	1	0.2150	0.2550	0.4850	0.2367	0.3397	0.4073
262	20	Surface	1	0.2400	0.3260	0.3860	0.3510	0.2010	0.2375
262	20	Surface	1	0.2550	0.4380	0.2020	0.2020	0.1120	0.1335
265	21	Surface	1	0.2020	0.2100	0.0650	0.0650	0.0400	0.0200
265	21	Surface	1	0.2000	0.2650	0.0885	0.0885	0.2240	0.0400
4	1	Tile	1	0.1770	0.2240	0.0400	0.1770	0.1035	0.3745
10	2	Tile	1	0.0750	0.0980	0.5850	0.0655	0.8876	0.3781
12	2	Tile	1	0.0560	0.1090	0.1640	0.5377	0.8876	0.3781
18	3	Tile	1	0.0560	0.0980	0.1640	0.5377	0.1360	0.0570
18	3	Tile	1	0.0560	0.1090	0.1640	0.5377	0.0977	0.0977
24	4	Tile	1	0.1100	0.1310	0.0500	0.1100	0.0500	0.1100
32	5	Tile	1	0.1020	0.1070	0.0850	0.1020	0.0850	0.1020
38	6	Tile	1	0.0810	0.1700	0.0360	0.0810	0.0360	0.0810
38	6	Tile	1	0.1100	0.1310	0.0500	0.1100	0.0500	0.1100
39	6	Tile	1	0.1020	0.1070	0.0850	0.1020	0.0850	0.1020
39	6	Tile	1	0.0810	0.1700	0.0360	0.0810	0.0360	0.0810
40	6	Tile	1	0.3800	0.4120	0.2350	0.4300	0.4360	0.1275
42	7	Tile	1	0.4800	0.4600	0.0200	0.4800	0.4300	0.1275
52	8	Tile	1	0.3800	0.4120	0.2350	0.4300	0.4360	0.1275
63	8	Tile	1	0.4800	0.4600	0.0200	0.4800	0.4300	0.1275
70	9	Tile	1	0.0350	0.0800	0.6020	0.0350	0.0800	0.6020
71	9	Tile	1	0.1800	0.2250	0.9700	0.1470	0.2175	0.5005
71	9	Tile	1	0.1140	0.2100	0.0310	0.1140	0.0500	0.1000
101	11	Tile	1	0.0500	0.0900	0.0900	0.0500	0.0900	0.0900
101	11	Tile	1	0.0500	0.0900	0.0900	0.0500	0.0900	0.0900
111	12	Tile	1	0.0500	0.0900	0.0900	0.0500	0.0900	0.0900

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P* for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
125	13	Tile	1	0.0850	0.0650	0.0610	0.0850	0.0650	0.0810
134	14	Tile	1	0.1850	0.2350	0.0750	0.1125	0.1585	0.4375
135	14	Tile	1	0.0400	0.0820	0.8000	0.0450	0.1387	0.2300
136	15	Tile	1	0.1350	0.4550	0.1750	0.1060		0.0637
137	15	Tile	1	0.1650	0.1160	0.0600	0.0400		
137	15	Tile	1	0.1160	5.6300	9.0000	0.3500	2.3633	4.4317
159	16	Tile	1	0.8800	0.8750	0.0500			0.1603
159	16	Tile	1	0.5800	3.4200	0.0810			
179	16	Tile	1	0.0700	0.0700	0.9250	0.0637	0.0633	1.1750
195	17	Tile	1	0.0710	0.1250	0.0100			
195	17	Tile	1	0.0500	0.0550	2.5900			
196	17	Tile	1						
225	18	Tile	1	0.1750	5.7100	0.1000	0.1750	5.7100	0.1000
225	19	Tile	1	0.1500	4.3000	2.5100	0.1500	4.3000	2.5100
231	20	Tile	1	0.1850	0.2130	0.7060	0.2720	0.1996	0.3982
250	21	Tile	1	0.9200	0.4100	0.5250			
250	21	Tile	1	0.1750	0.1800	0.1900			
250	21	Tile	1	0.0100	0.0750	0.3450			
250	21	Tile	1	0.0700	0.1200	0.2250			
251	21	Tile	1	0.1580	0.2200	0.3480	0.1910	0.2323	0.1608
258	22	Tile	1	0.2450	0.1620	0.1700			
258	22	Tile	1	0.2000	0.3000	0.0400			
258	22	Tile	1	0.1610	0.2470	0.0850			
258	22	Tile	1	0.1700	0.2600	0.5500	0.1700	0.2600	0.5500
259	23	Tile	1	0.1750	0.2360	0.3847	0.3282	0.2832	0.5009
262	24	Tile	1	0.1990	0.2150	0.9500			
262	24	Tile							

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
262	24	Tile	1	0.9820	0.5950	1.0000			
263	24	Tile	1	0.1430	0.1950	0.0100			
263	24	Tile	1	0.1420	0.1750	0.1600			
265	25	Tile	1	0.1420	0.1450	0.2020	0.1420	0.1450	0.2020
4	1	Surface	2	0.2410	0.3010	0.0150	0.1505	0.1905	0.0950
4	1	Surface	2	0.0600	0.0800	0.1750			
10	2	Surface	2	0.1210	0.1560	0.0200	0.1210	0.1580	0.0200
18	3	Surface	2	0.1610	0.1790	0.0150	0.1610	0.1790	0.0150
38	4	Surface	2	0.0900	0.1060	0.0200	0.0900	0.1060	0.0200
39	5	Surface	2	0.1600	0.2060	0.0400	0.1600	0.2155	0.0300
39	5	Surface	2	0.1600	0.2250	0.0200			
39	5	Surface	2	0.2020	0.0660	0.0500	0.1165	0.4255	0.0300
53	6	Surface	2	0.0310	0.7850	0.0100			
53	6	Surface	2						
58	7	Surface	2						
101	8	Surface	2	0.0490	0.6100	0.0100	0.0490	0.6100	0.0100
134	9	Surface	2	0.3350	0.3600	0.1100	0.3350	0.3600	0.1100
136	10	Surface	2	0.2060	0.2860	0.0700	0.2060	0.2380	0.0650
137	10	Surface	2	0.2700	0.3810	0.0600			
137	11	Surface	2	0.2260	0.2910	0.0220	0.2260	0.2910	0.0220
159	12	Surface	2	9.3100	7.9500	0.2060	9.6550	8.9750	0.2685
159	12	Surface	2	10.0000	10.0000	0.3310			
195	13	Surface	2	0.2350	0.2750	0.2250	0.2350	0.2750	0.2250
225	14	Surface	2	0.1560	4.3200	0.1000	0.1560	4.3200	0.1000
231	15	Surface	2	0.1150	7.3100	4.9300	0.1150	7.3100	4.9300
250	16	Surface	2	0.3950	0.3980	0.7010	0.4575	0.4905	0.7325
250	16	Surface	2	0.5200	0.5830	0.7640			
250	17	Surface	2	0.5920	0.8300	0.8200	0.5827	0.6120	0.7000

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P^a for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
250	17	Surface	2	0.5780	0.5030	0.6400			
250	17	Surface	2	0.5780	0.5030	0.6400			
258	18	Surface	2	0.3100	0.4490	0.5870	0.4150	0.5503	0.5003
258	18	Surface	2	0.4000	0.5150	0.2630			
258	18	Surface	2	0.5350	0.6870	0.6510			
259	19	Surface	2	0.4220	0.5100	0.3490	0.4220	0.5100	0.3490
262	20	Surface	2	0.4190	0.4150	0.2330	0.4270	0.4550	0.4189
262	20	Surface	2	0.4190	0.4400	0.6400			
262	20	Surface	2	0.4430	0.5100	0.3838			
265	21	Surface	2	0.4070	0.4960	0.0650	0.4435	0.5035	0.0400
265	21	Surface	2	0.4800	0.5110	0.0150			
4	1	Tile	2	0.5850	0.5410	0.0650	0.5850	0.5410	0.0650
10	2	Tile	2						
12	2	Tile	2						
18	3	Tile	2	0.0950	0.1220	0.8310	0.0975	0.22220	0.4235
18	3	Tile	2	0.1000	0.3220	0.0160			
24	4	Tile	2						
32	5	Tile	2						
38	6	Tile	2						
38	6	Tile	2	0.1060	0.1260	0.0320			
39	6	Tile	2	0.1140	0.2010	0.0500			
39	6	Tile	2	0.1400	0.2550	0.0550			
40	6	Tile	2						
45	7	Tile	2						
53	8	Tile	2	0.4100	2.8500	0.0750	0.3175	1.6110	0.0775
53	8	Tile	2	0.2250	0.3720	0.0800			
70	9	Tile	2				0.3175	1.6110	0.0775
71	9	Tile	2						

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P* for ridge tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
92	10	Til	2	0.0610	0.1110	0.3400	0.0610	0.1110	0.3400
101	11	Til	2	0.2200	0.3240	0.0400	0.1475	0.2095	0.0455
101	11	Til	2	0.0750	0.0950	0.0510	0.0460	0.0500	0.0460
111	12	Til	2	0.0650	0.0500	0.0460	0.0650	0.0500	0.0260
125	13	Til	2	0.1150	0.1330	0.0260	0.1150	0.1330	0.1275
134	14	Til	2	0.1920	0.1930	0.0750	0.1210	0.1275	0.22975
135	14	Til	2	0.0500	0.0620	4.5200	0.0620	0.0650	0.1547
136	15	Til	2	0.2100	0.2700	0.0650	0.2267	0.2267	0.0537
137	15	Til	2	0.1300	0.2200	0.0610	0.1300	0.2200	0.0610
137	15	Til	2	0.1240	0.1960	0.0350	0.1240	0.1960	0.0350
159	16	Til	2	5.8500	7.2000	0.1250	3.2503	3.6035	0.0850
159	16	Til	2	6.3000	6.2000	0.0800	6.3000	6.2000	0.0800
159	16	Til	2	0.7500	0.8150	0.0300	0.7500	0.8150	0.0300
179	16	Til	2	0.1010	0.1990	0.0250	0.1010	0.1990	0.0250
195	17	Til	2	0.0750	0.1060	0.0400	0.0750	0.1060	0.0400
195	17	Til	2	0.1740	0.1950	0.0290	0.1740	0.1950	0.0290
196	17	Til	2	0.1640	0.2160	2.9900	0.1640	0.2160	2.9900
225	18	Til	2	0.1850	4.5500	0.1000	0.1850	4.5500	0.1000
225	19	Til	2	0.1100	3.7600	5.2100	0.1100	3.7600	5.2100
231	20	Til	2	0.6150	0.7000	0.0500	0.4160	0.5020	0.1490
250	21	Til	2	0.4230	0.5650	0.3050	0.3360	0.4400	0.2130
250	21	Til	2	0.4160	0.5020	0.1490	0.4160	0.5020	0.1490
251	21	Til	2	0.2100	0.3500	0.0330	0.2100	0.3500	0.0330
258	22	Til	2	0.7950	0.3400	0.1800	0.7950	0.3400	0.1800
258	22	Til	2	0.4950	0.6720	0.4500	0.4950	0.6720	0.4500
258	22	Til	2	0.4350	0.5550	0.2260	0.4350	0.5550	0.2260

Appendix 18A. Sample and event concentration for ortho P, soluble P and sediment P* for ridge tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
258	22	Tile	2	0.1050	0.1500	0.6800			
259	23	Tile	2	0.3400	0.3630	0.4960	0.3400	0.3630	0.4960
262	24	Tile	2	0.1900	0.6200	1.0000	0.4653	0.5158	0.5230
262	24	Tile	2	0.8340	0.2800	1.0000			
262	24	Tile	2	0.4300	0.5830	0.0100			
263	24	Tile	2	0.4070	0.5800	0.0820			
263	24	Tile	2						
265	25	Tile	2	0.3370	0.4300	0.0150	0.3370	0.4300	0.0150

* Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P* for conventional tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1	0.3050	0.3050	0.0320	0.2530	0.2480	0.0225
4	1	Surface	1	0.2010	0.1910	0.0150			
10	2	Surface	1						
18	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
53	6	Surface	1	0.1820	0.0950	0.1560	0.1535	0.1775	0.0865
53	6	Surface	1	0.1250	0.2600	0.0150	0.1535	0.1775	0.0865
58	7	Surface	1						
101	8	Surface	1						
134	9	Surface	1						
136	10	Surface	1						
137	10	Surface	1						
137	11	Surface	1						
159	12	Surface	1						
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1						
231	15	Surface	1						
250	16	Surface	1	0.1380	0.1500	0.5150	0.1515	0.1975	0.4725
250	16	Surface	1	0.1650	0.2450	0.4300	0.2450	0.2220	0.2840
250	17	Surface	1	0.2220	0.2840	0.5650	0.2840	0.5650	
250	17	Surface	1						
258	18	Surface	1	0.2000	0.2880	0.7000	0.2790	0.2443	0.4840
258	18	Surface	1	0.5020	0.2950	0.1340			

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P* for conventional tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L		Event Soluble P. Conc., mg/L		Event Sediment P. Conc., mg/L	
							-2	-2	-2	-2	-2	-2
258	18	Surface	1	0.1350	0.1500	0.6180						
259	19	Surface	1	0.1250	0.1700	0.3250						
262	20	Surface	1	0.1500	0.1860	0.4720						
262	20	Surface	1	0.1530	0.1050	0.3750						
262	20	Surface	1	0.1440	0.2900	0.3089						
265	21	Surface	1									
4	1	Tile	1									
10	2	Tile	1	0.0260	0.0820	0.2500						
12	2	Tile	1									
18	3	Tile	1	0.1260	0.1600	0.6050						
18	3	Tile	1	0.0610	0.0910	0.1410						
24	4	Tile	1									
32	5	Tile	1									
39	6	Tile	1	0.0500	0.1100	0.1580						
39	6	Tile	1	0.8100	0.6300	0.0350						
39	6	Tile	1	0.0590	0.1240	0.0260						
40	6	Tile	1	0.0400	0.1660	0.0550						
45	7	Tile	1									
53	8	Tile	1	0.0950	0.1700	0.1810						
53	8	Tile	1	0.1300	0.2000	0.2450						
70	9	Tile	1									
71	9	Tile	1									
71	9	Tile	1									
92	10	Tile	1	0.0490	0.1020	0.2910						
101	11	Tile	1	0.4210	0.5150	0.1450						

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P* for conventional tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
							Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L
101	11	Tile	1	0.0800	0.1300	0.0310	0.0500	0.1200	0.1300
111	12	Tile	1	0.0500	0.1200	0.1300	0.0950	0.0900	0.0560
125	13	Tile	1	0.0950	0.0900	0.0560	0.0150	0.0950	0.2275
134	14	Tile	1	0.1490	0.1560	0.0440	0.0750	0.1155	0.2937
135	14	Tile	1	0.0410	0.0900	0.7200	0.1310	0.1607	0.137
136	15	Tile	1	0.0900	0.1600	0.2350	0.2350	0.1510	0.159
137	15	Tile	1	0.2660	0.1160	0.0100	0.4350	0.0300	0.0267
137	15	Tile	1	0.4850	5.9100	0.7297	0.8420	2.4400	0.159
159	16	Tile	1	0.9120	0.9250	0.0200	0.3450	5.6300	0.2370
159	16	Tile	1	0.3000	0.3150	0.0300	0.0660	4.5600	0.2383
179	16	Tile	1	0.3100	0.1090	0.1300	0.3100	0.1300	3.4067
195	17	Tile	1	0.0900	0.1250	0.1090	0.0990	0.1300	0.159
195	17	Tile	1	0.0900	0.0980	0.1340	0.1080	0.1250	0.158
225	18	Tile	1	0.1300	4.1500	0.1340	0.1080	0.3250	0.158
225	19	Tile	1	0.1250	4.1100	0.1100	0.1080	0.1650	0.158
231	20	Tile	1	0.0980	0.1340	0.1650	0.0910	0.1900	0.158
250	21	Tile	1	0.1080	0.1180	0.1600	0.0620	0.1050	0.158
250	21	Tile	1	0.0910	0.1400	0.1550	0.0990	0.1350	0.158
250	21	Tile	1	0.1180	0.1400	0.1100	0.1180	0.1600	0.158
250	21	Tile	1	0.1400	0.1550	0.1100	0.1400	0.1720	0.158
258	22	Tile	1	0.1550	0.1800	0.1375	0.1550	0.1100	0.1585
258	22	Tile	1	0.1900	0.1900	0.1713	0.1900	0.1800	0.158
258	22	Tile	1	0.1370	0.1370	0.0650	0.1370	0.0790	0.158

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P^a for conventional tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
							Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	23	Tile	1	0.1100	0.1630	0.4550	0.1100	0.1630	0.4550
262	24	Tile	1	0.5400	0.2700	0.5227	0.4330	0.2126	0.5585
262	24	Tile	1	1.2500	0.2150	1.0000			
262	24	Tile	1	0.1100	0.2230	1.0000			
263	24	Tile	1	0.1450	0.2000	0.0100			
263	24	Tile	1	0.1200	0.1550	0.2500			
265	25	Tile	1	0.1170	0.1520	0.2800	0.1170	0.1520	0.2800
4	1	Surface	2	0.2310	0.2660	0.0200	0.3630	0.3590	0.0195
4	1	Surface	2	0.5550	0.4500	0.0190			
10	2	Surface	2				0.0000	0.0000	0.0000
18	3	Surface	2	0.0460	0.0800	0.0650	0.0460	0.0800	0.0650
38	4	Surface	2	0.1510	0.1600	0.0250	0.1510	0.1600	0.0250
39	5	Surface	2	0.0820	0.3080	0.0600	0.0810	0.4205	0.0425
39	5	Surface	2						
39	5	Surface	2	0.0600	0.5350	0.0250			
52	6	Surface	2	0.0950	0.1150	0.2700	0.1590	0.1525	0.1850
53	6	Surface	2	0.2210	0.1900	0.1000			
58	7	Surface	2						
101	8	Surface	2	0.0900	0.1350	0.1680	0.0900	0.1350	0.1680
134	9	Surface	2	0.0850	0.3290	0.0150	0.0850	0.3290	0.0150
136	10	Surface	2	0.0630	0.1360	0.0310	0.0690	0.1255	0.0905
137	10	Surface	2	0.0750	0.1150	0.1500			
137	11	Surface	2	0.0700	0.3250	0.0740	0.0700	0.3250	0.0740
159	12	Surface	2	0.1340	0.1160	0.6420	0.1340	0.1160	0.6420
159	12	Surface	2						
195	13	Surface	2				0.0000	0.0000	0.0000
226	14	Surface	2				0.0000	0.0000	0.0000

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P^a for conventional tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
231	15	Surface	2	0.1240	4.3500	5.0200	0.1240	4.3500	5.0200
250	16	Surface	2	0.0450	0.0900	0.5800	0.0650	0.1150	0.5200
250	16	Surface	2	0.0850	0.1400	0.4600	0.1570	0.5300	0.3930
250	17	Surface	2	0.0860	0.1570	0.5300	0.2270	0.2560	0.1920
250	17	Surface	2	0.1500	0.1300	0.5030	0.1300	0.5250	0.4670
258	18	Surface	2	0.5500	1.5500	0.6730	0.2250	0.2980	0.2250
258	18	Surface	2	0.8000	2.0250	0.1000	0.4150	0.0680	0.1000
258	18	Surface	2	0.0680	0.0770	0.1320	0.4800	0.1050	0.2367
259	19	Surface	2	0.0680	0.1300	0.3530	0.2250	0.4077	0.4679
262	20	Surface	2	0.0770	0.1080	0.1370	0.0600	0.1300	0.1560
262	20	Surface	2	0.1300	0.1300	0.1750	0.0350	0.0325	0.0475
262	20	Surface	2	0.1080	0.1080	0.1750	0.4150	0.0650	0.2075
265	21	Surface	2	0.0700	0.11370	0.1300	0.1300	0.1000	0.4150
265	21	Surface	2	0.1900	0.1900	0.1900	0.0500	0.0370	0.0625
4	1	Tile	2	0.0650	0.1000	0.0750	0.1395	0.1775	0.1064
10	2	Tile	2	0.0650	0.1200	0.1900	0.0500	0.0370	0.1064
12	2	Tile	2	0.1590	0.1650	0.0750	0.0650	0.0463	0.1330
18	3	Tile	2	0.1200	0.1900	0.1900	0.0500	0.0370	0.0858
18	3	Tile	2	0.0550	0.1040	0.0500	0.0350	0.0210	0.1510
24	4	Tile	2	0.0550	0.1150	0.1310	0.0460	0.0370	0.0858
32	5	Tile	2	0.0550	0.1150	0.1310	0.0340	0.0370	0.1064
38	6	Tile	2	0.0550	0.1150	0.1310	0.0790	0.0370	0.1330
38	6	Tile	2	0.0500	0.1150	0.1310	0.0340	0.0370	0.1250
39	6	Tile	2	0.0500	0.1150	0.1310	0.0340	0.0370	0.1250
39	6	Tile	2	0.0460	0.1150	0.1310	0.0340	0.0370	0.1250
40	6	Tile	2	0.0460	0.1150	0.1310	0.0340	0.0370	0.1250
45	7	Tile	2	0.0460	0.1150	0.1310	0.0340	0.0370	0.1250

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P^a for conventional tillage, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
53	8	Tile	2	0.0920	0.1400	0.0300	0.22330	0.2580	0.1325
53	8	Tile	2	0.3740	0.3760	0.2350	0.2330	0.2580	0.1325
70	9	Tile	2	0.0450	0.1060	0.0900	0.0450	0.1080	0.0800
71	9	Tile	2	0.0710	0.1240	0.0500	0.0625	0.1115	0.0375
92	10	Tile	2	0.0540	0.0990	0.0250	0.0450	0.1100	0.0810
101	11	Tile	2	0.0450	0.1100	0.0810	0.0450	0.1100	0.0810
101	11	Tile	2	0.0620	0.0900	0.0200	0.0620	0.0900	0.0200
111	12	Tile	2	0.0610	0.1150	0.1050	0.0605	0.1050	0.1880
125	13	Tile	2	0.0600	0.0950	0.2710	0.0667	0.1817	0.0657
134	14	Tile	2	0.0650	0.2610	0.1300	0.0667	0.1817	0.0657
135	14	Tile	2	0.0650	0.0850	0.1700	0.0610	0.0960	0.0610
136	15	Tile	2	0.0650	0.0650	0.1140	0.0150	2.4383	2.8917
137	15	Tile	2	0.0700	0.1400	0.1750	0.0310	0.1220	0.1220
137	15	Tile	2	0.0700	0.1400	0.1750	0.03200	0.1373	1.7633
159	16	Tile	2	0.4750	6.7000	7.9500	0.0750	0.0600	0.1000
159	16	Tile	2	0.0740	0.2210	0.2450	0.0200	0.2010	0.47500
159	16	Tile	2	0.0710	0.0950	0.0920	0.0200	0.1604	0.1560
179	16	Tile	2	0.0740	0.0740	0.0600	0.0600	0.2430	0.4400
195	17	Tile	2	0.2210	0.0710	0.0920	0.0200	0.1230	0.0950
195	17	Tile	2	0.0710	0.0710	0.0920	0.0200	0.1250	0.0980
196	17	Tile	2	0.0740	0.0740	0.0600	0.0600	0.2430	0.4400
225	18	Tile	2	0.2010	4.7500	4.7500	0.1000	0.2010	4.7500
225	19	Tile	2	0.1560	5.7100	4.0100	0.1560	0.1560	5.7100
231	20	Tile	2	0.4400	0.5950	0.3000	0.3000	0.1604	0.40100
250	21	Tile	2	0.0950	0.1230	0.2430	0.2430	0.2384	0.2754
250	21	Tile	2	0.0980	0.1250	0.7120	0.7120	0.2754	0.2754

Appendix 19A. Sample and event concentration for ortho P, soluble P and sediment P* for conventional tillage, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
							Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
250	21	Tile	2	0.1190	0.2090	0.0550			
251	21	Tile	2	0.0500	0.1400	0.0670			
258	22	Tile	2	0.1190	0.1970	0.6000	0.1273	0.1730	0.2745
258	22	Tile	2	0.1300	0.1480	0.2230			
258	22	Tile	2	0.1400	0.1950	0.1550			
258	22	Tile	2	0.1200	0.1520	0.1200			
259	23	Tile	2	0.6920	0.4630	0.5200	0.6920	0.4630	0.5200
262	24	Tile	2	0.1370	0.1600	0.0250	0.1448	0.2320	0.2804
262	24	Tile	2	0.1320	0.4000	0.9250			
262	24	Tile	2	0.1450	0.1750	0.0150			
263	24	Tile	2	0.1650	0.2500	0.0120			
263	24	Tile	2	0.1450	0.1750	0.3250			
265	25	Tile	2	0.1500	0.2450	0.0550	0.1500	0.2450	0.0550

* Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 20A. Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
4	1	Surface	1						
4	1	Surface	1						
10	2	Surface	1						
16	3	Surface	1						
38	4	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
39	5	Surface	1						
53	6	Surface	1						
53	6	Surface	1						
58	7	Surface	1						
101	8	Surface	1						
134	9	Surface	1						
136	10	Surface	1						
137	10	Surface	1						
137	11	Surface	1						
159	12	Surface	1						
159	12	Surface	1						
195	13	Surface	1						
225	14	Surface	1						
231	15	Surface	1						
250	16	Surface	1						
250	16	Surface	1						
250	17	Surface	1						
258	18	Surface	1						
258	18	Surface	1						
258	18	Surface	1						

Appendix 20A. Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
259	19	Surface	1						
262	20	Surface	1						
262	20	Surface	1						
262	20	Surface	1						
265	21	Surface	1	0.2660	0.1850	0.0260	0.2860	0.1850	0.0260
4	1	Tile	1	0.0360	0.0900	0.1500	0.0360	0.0900	0.1500
10	2	Tile	1						
12	2	Tile	1	0.0800	0.0900	0.4410	0.0580	0.0875	0.5880
18	3	Tile	1	0.0360	0.0850	0.6910	0.2000	0.2150	0.1050
18	3	Tile	1						
24	4	Tile	1						
32	5	Tile	1						
38	6	Tile	1	0.3290	0.2600	0.2860	0.2000	0.2150	0.1050
38	6	Tile	1	0.1300	0.1900	0.0290	0.2000	0.2150	0.1050
39	6	Tile	1	0.1410	0.1950	0.0290	0.2000	0.2150	0.1050
40	6	Tile	1						
45	7	Tile	1						
53	8	Tile	1	0.7800	4.9300	0.1850	0.7860	5.2750	0.2425
53	8	Tile	1	0.7920	5.6200	0.3000	0.1160	0.2000	0.2890
70	9	Tile	1						
71	9	Tile	1						
92	10	Tile	1	0.1160	0.2000	0.2690	0.1160	0.2000	0.2690
101	11	Tile	1	0.4850	0.9500	0.0700	0.4075	0.6870	0.0475
101	11	Tile	1	0.3300	0.4240	0.0250	0.1450	0.0710	0.0710
111	12	Tile	1	0.1450	0.1650	0.0710	0.1450	0.1650	0.0710

Appendix 20A. Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
125	13	Tile	1	0.2000	0.3060	0.5010	0.1350	0.2105	3.0855
134	14	Tile	1	0.0700	0.1150	5.6100	0.1350	0.2105	3.0855
135	14	Tile	1	0.1510	0.1900	0.2210	0.2900	0.3703	0.1460
136	15	Tile	1	0.6120	0.7400	0.1520	0.1810	0.0650	
137	15	Tile	1	0.1070	0.2900	0.3703	0.1460	0.1460	
137	15	Tile	1						
159	16	Tile	1						
159	16	Tile	1						
159	16	Tile	1						
179	16	Tile	1						
195	17	Tile	1						
195	17	Tile	1						
196	17	Tile	1						
225	18	Tile	1						
225	19	Tile	1						
231	20	Tile	1						
250	21	Tile	1						
250	21	Tile	1						
250	21	Tile	1						
250	21	Tile	1						
251	21	Tile	1						
258	22	Tile	1						
258	22	Tile	1						
258	22	Tile	1						
258	22	Tile	1						
258	22	Tile	1						
258	22	Tile	1						
259	23	Tile	1						
262	24	Tile	1						
262	24	Tile	1						

Appendix 20A. Sample and event concentration for ortho P, soluble P and sediment P^a for sod treatment, 1990

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Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
262	24	Tile	1	0.8800	1.5500	0.0350			
263	24	Tile	1	0.6070	0.6650	0.0350			
263	24	Tile	1	0.5420	0.6000	0.7750			
265	25	Tile	1	0.1670	0.2120	0.0700	0.1670	0.2120	0.0700
4	1	Surface	2	6.5700	6.6000	0.2050	6.8350	6.5000	0.1296
4	1	Surface	2	7.1000	6.4000	0.0540			
10	2	Surface	2						
18	3	Surface	2						
38	4	Surface	2						
39	5	Surface	2						
39	5	Surface	2						
39	5	Surface	2						
53	6	Surface	2						
53	6	Surface	2						
58	7	Surface	2						
101	8	Surface	2						
134	9	Surface	2						
136	10	Surface	2						
137	10	Surface	2						
137	11	Surface	2						
159	12	Surface	2						
159	12	Surface	2						
195	13	Surface	2						
225	14	Surface	2						
231	15	Surface	2						
250	16	Surface	2						
250	16	Surface	2						
250	17	Surface	2						

Appendix 20A. Sample and event concentration for ortho P, soluble P and sediment P* for sed treatment, 1990

Julian Date/90	Event #	Source	Rep	Ortho P. Conc., mg/L	Soluble P. Conc., mg/L	Sediment P. Conc., mg/L	Event Ortho P. Conc., mg/L	Event Soluble P. Conc., mg/L	Event Sediment P. Conc., mg/L
250	17	Surface	2	1.3500	2.4500	0.0600	0.7500	1.3550	0.3100
258	18	Surface	2	0.1500	0.2600	0.5600			
258	18	Surface	2						
258	18	Surface	2						
259	19	Surface	2						
262	20	Surface	2						
262	20	Surface	2	1.5000	0.8500	0.6250	1.5000	0.8500	0.6250
262	20	Surface	2						
265	21	Surface	2						
265	21	Surface	2						

* Phosphorus concentration of sediment aliquot (Phosphorus in 50 mL from sediment in 250 mL aliquot)

Appendix 21A.

Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage,
1990

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Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	38.41	53.96	0.34
10	2	Surface	1	41.25	39.74	3.62
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	41.21	14.80	1.76
53	6	Surface	1	60.07	43.38	4.04
58	7	Surface	1	0.00	0.00	0.00
101	8	Surface	1	12.73	15.92	1.05
134	9	Surface	1	14.67	17.88	1.19
136	10	Surface	1	18.94	23.80	0.25
137	11	Surface	1	10.88	5.50	0.36
159	12	Surface	1	0.00	0.00	0.00
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00
250	16	Surface	1	32.72	41.71	11.34
250	17	Surface	1	46.50	48.35	7.27
258	18	Surface	1	24.49	47.46	4.95
259	19	Surface	1	30.72	23.86	6.69
262	20	Surface	1	26.46	32.85	3.40
265	21	Surface	1	20.34	22.45	0.29
4	1	Tile	1	0.00	0.00	0.00
10	2	Tile	1	0.17	0.23	0.02
18	3	Tile	1	12.82	18.01	1.53
24	4	Tile	1	5.06	8.05	1.94
32	5	Tile	1	6.53	10.38	2.51
38	6	Tile	1	13.27	21.09	5.10
45	7	Tile	1	7.16	6.68	0.48
53	8	Tile	1	80.69	75.27	5.43
71	9	Tile	1	52.86	49.30	3.55
92	10	Tile	1	2.09	6.16	58.11
101	11	Tile	1	38.42	49.18	6.39
111	12	Tile	1	2.65	5.30	0.92
125	13	Tile	1	9.90	13.02	0.55
134	14	Tile	1	29.04	49.89	12.62
136	15	Tile	1	45.75	52.83	55.57
159	16	Tile	1	551.64	599.11	0.44
195	17	Tile	1	1.27	1.66	6.56
225	18	Tile	1	0.00	0.00	0.00
225	19	Tile	1	0.72	26.31	0.11
231	20	Tile	1	4.33	135.70	16.87

Appendix 21A.

Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage,
1990

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Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	42.88	53.84	7.60
258	22	Tile	1	30.87	34.41	4.84
259	23	Tile	1	18.41	25.84	1.67
262	24	Tile	1	56.09	21.58	6.19
265	25	Tile	1	4.94	5.87	0.33
4	1	Surface	2	31.62	36.59	0.63
10	2	Surface	2	16.02	18.80	2.04
18	3	Surface	2	0.77	1.87	0.07
38	4	Surface	2	2.25	5.94	0.44
39	5	Surface	2	6.44	2.88	0.80
53	6	Surface	2	29.64	26.96	8.15
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	1.06	17.78	0.09
134	9	Surface	2	16.60	20.20	0
136	10	Surface	2	12.31	18.40	
137	11	Surface	2	3.73	4.68	0..
159	12	Surface	2	24.79	125.27	0.58
195	13	Surface	2	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00
231	15	Surface	2	5.44	138.15	38.93
250	16	Surface	2	24.25	30.61	8.67
250	17	Surface	2	35.47	42.91	3.54
258	18	Surface	2	23.46	37.93	6.02
259	19	Surface	2	25.27	30.56	8.16
262	20	Surface	2	34.32	41.83	7.09
265	21	Surface	2	13.10	12.77	0.78
4	1	Tile	2	0.00	0.00	0.00
10	2	Tile	2	0.96	1.40	0.17
18	3	Tile	2	27.52	38.78	4.99
24	4	Tile	2	12.27	17.28	2.22
32	5	Tile	2	14.69	20.70	2.68
38	6	Tile	2	14.45	23.34	1.47
45	7	Tile	2	29.92	24.23	2.62
53	8	Tile	2	90.98	73.67	7.95
70	9	Tile	2	147.43	119.38	12.89
92	10	Tile	2	3.39	5.74	6.22
101	11	Tile	2	40.19	50.56	2.41
111	12	Tile	2	5.00	12.38	1.27
125	13	Tile	2	12.38	16.74	0.52
134	14	Tile	2	19.15	22.24	35.05
136	15	Tile	2	43.66	57.49	52.84

Appendix 21A.

Event losses for ortho P, soluble P and sediment P in g/ha for zero tillage,
1990

- 3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	1042.13	1080.45	1.77
195	17	Tile	2	6.99	8.19	16.82
225	18	Tile	2	0.19	5.40	0.03
225	19	Tile	2	2.50	70.80	0.36
231	20	Tile	2	4.58	109.09	22.88
250	21	Tile	2	80.23	116.20	16.60
258	22	Tile	2	25.65	20.90	4.23
259	23	Tile	2	10.16	12.68	3.62
262	24	Tile	2	18.39	17.72	2.55
265	25	Tile	2	6.48	9.06	0.10

Appendix 22A.

Event losses for ortho P, soluble P and sediment P in g/ha for ridge tillage,
1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	30.00	37.22	0.56
10	2	Surface	1	13.67	12.15	0.24
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	15.58	33.58	1.53
53	6	Surface	1	64.77	54.40	9.91
58	7	Surface	1	0.00	0.00	0.00
101	8	Surface	1	10.89	17.82	0.59
134	9	Surface	1	13.60	11.70	0.34
136	10	Surface	1	18.20	10.06	0.37
137	11	Surface	1	4.18	6.26	0.30
159	12	Surface	1	0.00	0.00	0.00
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	6.05	238.08	25.31
250	16	Surface	1	18.41	25.96	8.02
250	17	Surface	1	29.16	40.83	13.22
258	18	Surface	1	20.80	30.05	6.53
259	19	Surface	1	13.72	17.31	7.25
262	20	Surface	1	15.31	21.97	5.27
265	21	Surface	1	2.50	2.95	0.33
4	1	Tile	1	0.55	0.70	0.02
10	2	Tile	1	8.77	11.10	0.40
18	3	Tile	1	8.55	13.51	9.78
24	4	Tile	1	29.06	47.96	4.09
32	5	Tile	1	29.75	49.10	4.18
38	6	Tile	1	11.46	15.96	1.34
45	7	Tile	1	5.40	5.47	0.32
53	8	Tile	1	115.55	117.16	6.85
70	9	Tile	1	86.73	87.94	5.14
92	10	Tile	1	2.00	4.58	6.89
101	11	Tile	1	20.38	30.16	13.88
111	12	Tile	1	2.10	4.21	0.76
125	13	Tile	1	6.65	5.09	0.96
134	14	Tile	1	11.10	15.64	8.83
136	15	Tile	1	19.77	32.79	1.82
159	16	Tile	1	168.62	316.20	2.29
195	17	Tile	1	0.57	0.75	2.12
225	18	Tile	1	0.00	0.00	0.00
225	19	Tile	1	1.73	56.53	0.20
231	20	Tile	1	3.71	106.30	12.41

Appendix 22A.

Event losses for ortho P, soluble P and sediment P in g/ha for ridge tillage,
1990

- 2

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	43.83	32.18	12.83
258	22	Tile	1	15.57	18.93	2.62
259	23	Tile	1	8.97	13.71	5.80
262	24	Tile	1	15.87	13.69	4.84
265	25	Tile	1	2.96	3.02	0.84
4	1	Surface	2	23.68	29.97	2.99
10	2	Surface	2	7.85	10.13	0.26
18	3	Surface	2	4.74	5.27	0.09
38	4	Surface	2	3.62	4.26	0.16
39	5	Surface	2	5.79	7.80	0.22
53	6	Surface	2	22.68	82.83	1.17
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	2.62	32.60	0.11
134	9	Surface	2	21.89	23.52	1.44
136	10	Surface	2	14.54	20.38	0.79
137	11	Surface	2	9.37	12.06	0.18
159	12	Surface	2	273.10	253.86	1.52
195	13	Surface	2	3.07	3.59	0.59
225	14	Surface	2	2.97	82.11	0.38
231	15	Surface	2	5.86	372.42	50.23
250	16	Surface	2	24.70	26.48	7.91
250	17	Surface	2	35.32	37.09	8.49
258	18	Surface	2	33.73	44.72	8.13
259	19	Surface	2	26.78	32.36	4.43
262	20	Surface	2	38.29	40.80	7.51
265	21	Surface	2	11.90	13.51	0.21
4	1	Tile	2	0.00	0.00	0.00
10	2	Tile	2	19.78	18.29	0.44
18	3	Tile	2	13.37	30.45	11.62
24	4	Tile	2	5.23	8.46	0.40
32	5	Tile	2	6.33	10.23	0.48
38	6	Tile	2	16.00	25.86	1.22
45	7	Tile	2	10.49	53.21	0.51
53	8	Tile	2	66.45	337.17	3.24
70	9	Tile	2	85.16	432.10	4.16
92	10	Tile	2	3.62	6.59	4.04
101	11	Tile	2	15.53	22.06	0.96
111	12	Tile	2	3.29	458.02	0.47
125	13	Tile	2	8.24	9.53	0.37
134	14	Tile	2	6.22	6.56	23.64
136	15	Tile	2	13.24	19.56	0.92

Appendix 22A.

Event losses for ortho P, soluble P and sediment P in g/ha for ridge tillage,
1990 - 3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	496.80	550.79	1.99
195	17	Tile	2	9.47	11.85	14.03
225	18	Tile	2	0.00	0.00	0.00
225	19	Tile	2	1.63	40.09	0.18
231	20	Tile	2	3.16	108.06	29.95
250	21	Tile	2	56.50	72.24	4.24
258	22	Tile	2	18.49	17.35	3.10
259	23	Tile	2	11.10	11.85	3.24
262	24	Tile	2	13.97	15.48	3.14
265	25	Tile	2	4.17	5.31	0.04

Appendix 23A. Event losses for ortho P, soluble P and sediment P in g/ha for conventional tillage, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	34.83	34.14	0.65
10	2	Surface	1	0.00	0.00	0.00
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	0.00	0.00	0.00
53	6	Surface	1	34.97	40.44	3.90
58	7	Surface	1	8.08	9.34	0.90
101	8	Surface	1	0.00	0.00	0.00
134	9	Surface	1	0.00	0.00	0.00
136	10	Surface	1	0.00	0.00	0.00
137	11	Surface	1	0.00	0.00	0.00
159	12	Surface	1	7.34	9.34	1.25
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00
250	16	Surface	1	7.73	10.08	4.82
250	17	Surface	1	13.58	17.37	6.91
258	18	Surface	1	13.05	11.43	4.53
259	19	Surface	1	5.32	7.23	2.77
262	20	Surface	1	6.57	8.55	3.40
265	21	Surface	1	0.00	0.00	0.00
4	1	Tile	1	0.07	0.22	0.13
10	2	Tile	1	1.00	3.16	1.93
18	3	Tile	1	23.72	31.84	18.93
24	4	Tile	1	22.92	24.62	2.42
32	5	Tile	1	26.47	28.43	2.79
38	6	Tile	1	41.76	44.85	2.37
45	7	Tile	1	4.18	6.87	1.58
53	8	Tile	1	43.85	72.12	16.61
71	9	Tile	1	17.62	36.68	20.93
92	10	Tile	1	3.33	6.93	3.95
101	11	Tile	1	57.20	73.64	4.02
111	12	Tile	1	3.55	8.52	1.85
125	13	Tile	1	11.87	11.24	1.40
134	14	Tile	1	17.05	20.73	8.18
136	15	Tile	1	57.99	54.17	19.80
159	16	Tile	1	25.83	86.38	0.19
195	17	Tile	1	6.50	6.54	18.69
225	18	Tile	1	0.14	4.52	0.02
225	19	Tile	1	1.54	49.26	0.26
231	20	Tile	1	3.54	116.23	16.52

Appendix 23A.

Event losses for ortho P, soluble P and sediment P in g/ha for conventional tillage, 1990

- 2

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	30.77	50.07	25.33
258	22	Tile	1	19.88	24.76	4.53
259	23	Tile	1	13.15	19.48	10.88
262	24	Tile	1	45.64	22.41	11.73
265	25	Tile	1	5.54	7.19	2.65
4	1	Surface	2	60.55	55.16	0.60
10	2	Surface	2	0.00	0.00	0.00
18	3	Surface	2	1.01	1.76	0.29
38	4	Surface	2	3.55	3.77	0.12
39	5	Surface	2	1.23	8.47	0.17
53	6	Surface	2	35.17	33.94	8.23
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	3.51	5.26	1.29
134	9	Surface	2	5.05	19.56	0.18
136	10	Surface	2	4.09	7.44	1.07
137	11	Surface	2	2.35	10.92	0.50
159	12	Surface	2	1.23	1.07	1.18
195	13	Surface	2	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00
231	15	Surface	2	3.38	118.40	27.33
250	16	Surface	2	3.41	6.03	5.45
250	17	Surface	2	6.85	11.14	4.56
258	18	Surface	2	27.31	34.29	4.86
259	19	Surface	2	4.51	6.63	5.51
262	20	Surface	2	5.83	13.15	5.20
265	21	Surface	2	2.58	3.10	0.19
4	1	Tile	2	0.24	0.37	0.30
10	2	Tile	2	2.93	4.50	3.74
18	3	Tile	2	21.28	27.08	1.91
24	4	Tile	2	3.28	7.60	1.88
32	5	Tile	2	2.84	6.58	1.63
38	6	Tile	2	8.48	19.66	4.88
45	7	Tile	2	17.59	19.48	2.00
53	8	Tile	2	36.11	39.98	4.11
70	9	Tile	2	62.07	68.73	7.06
92	10	Tile	2	2.06	4.84	0.82
101	11	Tile	2	6.45	11.50	0.77
111	12	Tile	2	1.95	4.77	0.70
125	13	Tile	2	4.45	6.46	0.29
134	14	Tile	2	4.99	8.66	3.10
136	15	Tile	2	10.59	28.85	3.04

Appendix 23A.

Event losses for ortho P, soluble P and sediment P in g/ha for conventional tillage, 1990

- 3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	101.29	120.12	1.01
195	17	Tile	2	4.46	5.02	12.88
225	18	Tile	2	0.52	12.40	0.05
225	19	Tile	2	4.63	109.39	0.46
231	20	Tile	2	4.93	180.49	25.35
250	21	Tile	2	42.26	62.81	14.51
258	22	Tile	2	7.49	10.18	3.23
259	23	Tile	2	25.97	17.38	3.90
262	24	Tile	2	5.63	9.02	2.02
265	25	Tile	2	3.82	6.24	0.28

Appendix 24A. Event losses for ortho P, soluble P and sediment P in g/ha for the sod treatment, 1990

- 1

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
4	1	Surface	1	0.00	0.00	0.00
10	2	Surface	1	0.00	0.00	0.00
18	3	Surface	1	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00
39	5	Surface	1	0.00	0.00	0.00
53	6	Surface	1	967.18	864.53	4.85
58	7	Surface	1	0.00	0.00	0.00
101	8	Surface	1	0.00	0.00	0.00
134	9	Surface	1	0.00	0.00	0.00
136	10	Surface	1	0.00	0.00	0.00
137	11	Surface	1	0.00	0.00	0.00
159	12	Surface	1	0.00	0.00	0.00
195	13	Surface	1	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00
250	16	Surface	1	0.00	0.00	0.00
250	17	Surface	1	0.00	0.00	0.00
258	18	Surface	1	0.00	0.00	0.00
259	19	Surface	1	0.00	0.00	0.00
262	20	Surface	1	0.00	0.00	0.00
265	21	Surface	1	0.00	0.00	0.00
4	1	Tile	1	8.06	5.61	0.16
10	2	Tile	1	0.13	0.34	0.11
18	3	Tile	1	4.07	6.15	7.95
24	4	Tile	1	2.22	2.39	0.23
32	5	Tile	1	8.46	9.10	0.89
38	6	Tile	1	11.92	12.81	1.25
45	7	Tile	1	4.93	33.07	0.30
53	8	Tile	1	424.28	2847.45	26.18
70	9	Tile	1	9.44	16.27	4.38
92	10	Tile	1	3.25	5.60	1.51
101	11	Tile	1	59.62	100.51	1.39
111	12	Tile	1	3.03	3.45	0.30
125	13	Tile	1	0.17	0.27	0.78
134	14	Tile	1	2.47	3.84	11.16
136	15	Tile	1	34.63	44.23	3.49
159	16	Tile	1	0.04	1.71	0.17
195	17	Tile	1	0.00	0.00	0.00
225	18	Tile	1	0.00	0.00	0.00
225	19	Tile	1	0.00	0.00	0.00
231	20	Tile	1	2.39	99.98	9.87

Appendix 24A. Event losses for ortho P, soluble P and sediment P in g/ha for the sod treatment, 1990

- 2

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
250	21	Tile	1	357.83	997.98	21.02
258	22	Tile	1	229.09	317.86	10.74
259	23	Tile	1	33.60	13.49	4.86
262	24	Tile	1	74.38	98.35	10.39
265	25	Tile	1	3.35	4.25	0.28
4	1	Surface	2	483.85	460.14	1.63
10	2	Surface	2	0.00	0.00	0.00
18	3	Surface	2	0.00	0.00	0.00
38	4	Surface	2	0.00	0.00	0.00
39	5	Surface	2	0.00	0.00	0.00
53	6	Surface	2	78.65	18.05	10.37
58	7	Surface	2	0.00	0.00	0.00
101	8	Surface	2	0.00	0.00	0.00
134	9	Surface	2	0.00	0.00	0.00
136	10	Surface	2	0.00	0.00	0.00
137	11	Surface	2	0.00	0.00	0.00
159	12	Surface	2	0.00	0.00	0.00
195	13	Surface	2	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00
231	15	Surface	2	0.00	0.00	0.00
250	16	Surface	2	0.00	0.00	0.00
250	17	Surface	2	0.00	0.00	0.00
258	18	Surface	2	13.02	23.52	1.08
259	19	Surface	2	0.00	0.00	0.00
262	20	Surface	2	15.81	8.96	1.32
265	21	Surface	2	0.00	0.00	0.00
4	1	Tile	2	49.14	25.63	0.80
10	2	Tile	2	5.00	4.30	2.44
18	3	Tile	2	15.80	16.09	2.81
24	4	Tile	2	12.90	29.89	0.28
32	5	Tile	2	24.57	56.95	0.53
38	6	Tile	2	45.92	106.44	0.98
45	7	Tile	2	18.08	58.07	1.21
53	8	Tile	2	282.31	906.50	18.91
70	9	Tile	2	33.28	45.38	3.03
92	10	Tile	2	7.35	10.02	0.67
101	11	Tile	2	67.53	121.78	1.33
111	12	Tile	2	10.70	7.23	0.52
125	13	Tile	2	5.26	6.90	0.07
134	14	Tile	2	3.90	5.84	2.00
136	15	Tile	2	51.08	59.50	3.04

Appendix 24A. Event losses for ortho P, soluble P and sediment P in g/ha for
the sod treatment, 1990

- 3

Julian Date/90	Event #	Source	Rep	Ortho P. loss, g/ha	Soluble P. loss, g/ha	Sediment P. loss, g/ha
159	16	Tile	2	52.62	46.56	0.07
195	17	Tile	2	0.00	0.00	0.00
225	18	Tile	2	0.00	0.00	0.00
225	19	Tile	2	4.16	62.21	0.30
231	20	Tile	2	4.85	118.80	15.20
250	21	Tile	2	849.90	1799.08	35.39
258	22	Tile	2	258.92	347.43	10.92
259	23	Tile	2	33.11	43.36	8.04
262	24	Tile	2	78.00	98.98	5.69
265	25	Tile	2	10.02	13.31	0.32

PART B



Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
17.40	1	Surface	1	0.88	0.88	0.39	0.39	11475.90
32.56	2	Surface	1	2.85	2.85	1.21	1.21	4913.60
48.00	3	Surface	1		2.85		1.21	1971.90
50.00	4	Surface	1		2.85		1.21	10732.30
276.00	5	Surface	1		0.00		0.00	0.00
291.96	6	Surface	1		3.27		0.21	2424.50
292.06	6	Surface	1	3.62		0.31		
292.08	6	Surface	1	5.11		0.26		
292.10	6	Surface	1	1.09		0.06		
297.00	7	Surface	1		0.00		0.00	0.00
310.00	8	Surface	1		3.35		0.39	3814.50
310.46	8	Surface	1	3.08		0.26		
310.56	8	Surface	1	2.14		0.16		
310.65	8	Surface	1	3.14		0.46		
310.83	8	Surface	1	5.06		0.69		
312.00	9	Surface	1		3.35		0.39	614.20
315.20	10	Surface	1	1.79	2.45	0.33	0.39	1777.90
315.25	10	Surface	1	3.10		0.44		
318.19	11	Surface	1	2.06	2.06	0.72	0.72	2877.00
321.57	12	Surface	1	1.84	1.58	0.85	0.70	1390.00
321.61	12	Surface	1	1.31		0.54		
325.61	13	Surface	1	2.45	2.28	0.45	0.47	4525.70
325.65	13	Surface	1	2.83		0.57		
325.81	13	Surface	1	1.57		0.40		
363.38	14	Surface	1	4.15	4.15	0.45	0.45	1390.00
17.35	1	Tile	1		0.00		0.00	0.00
32.56	2	Tile	1	0.87	0.87	0.84	0.84	1329.00
72.66	3	Tile	1	0.24	0.24	0.44	0.44	1735.00
84.39	4	Tile	1	0.35	0.33	0.51	0.52	8651.00
84.66	4	Tile	1	0.33		0.53		
85.42	4	Tile	1	0.30		0.52		
94.88	5	Tile	1		0.33		0.52	3034.00
97.92	6	Tile	1	0.60	0.60	1.03	1.03	7232.00
114.31	7	Tile	1		0.60		1.03	39.00
136.85	8	Tile	1		0.60		1.03	48.00
154.27	9	Tile	1	14.43	14.43	1.65	1.65	117.00
192.96	10	Tile	1	18.39	18.39	2.50	2.50	270.00
267.10	11	Tile	1	1.20	1.20	1.04	1.04	151.00
267.13	11	Tile	1					
267.38	11	Tile	1					

Appendix 1B. Surface and subsurface atrazine and de-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
276.41	12	Tile	1	1.45	1.64	1.09	1.03	2830.00
276.43	12	Tile	1	2.10		1.05		
276.44	12	Tile	1	2.17		0.99		
276.60	12	Tile	1	0.83		1.00		
277.44	12	Tile	1					
291.92	13	Tile	1	3.54	3.07	1.86	1.02	14323.00
291.96	13	Tile	1	2.23		0.89		
292.06	13	Tile	1	4.27		0.80		
292.10	13	Tile	1	4.12		0.88		
292.15	13	Tile	1	4.02		1.65		
292.38	13	Tile	1	2.23		0.51		
292.67	13	Tile	1	1.10		0.56		
297.74	14	Tile	1	2.03	1.88	0.54	0.42	4590.00
297.77	14	Tile	1	1.73		0.30		
310.38	15	Tile	1	3.54	3.15	1.35	0.87	18406.00
310.44	15	Tile	1	3.26		1.47		
310.56	15	Tile	1	4.09		1.32		
310.65	15	Tile	1	3.00		0.79		
310.83	15	Tile	1	4.60		0.73		
311.33	15	Tile	1	1.95		0.23		
312.40	15	Tile	1	1.64		0.23		
315.20	16	Tile	1	1.39	1.17	0.61	0.63	6282.00
315.24	16	Tile	1	1.64		0.65		
315.28	16	Tile	1					
315.46	16	Tile	1	1.64		0.63		
318.19	17	Tile	1	1.45	1.45	0.81	0.81	9131.00
321.58	18	Tile	1	1.76	1.76	0.43	0.43	5646.00
325.63	19	Tile	1	1.61	1.23	0.48	0.43	8789.00
325.83	19	Tile	1	1.19		0.45		
326.40	19	Tile	1	0.88		0.35		
359.68	20	Tile	1	0.69	0.97	0.47	0.46	12926.00
362.46	20	Tile	1	0.47		0.25		
363.38	20	Tile	1	1.76		0.65		
17.40	1	Surface	2	0.42	0.42	0.09	0.09	17100.60
32.56	2	Surface	2	1.35	1.35	0.40	0.40	0.00
48.00	3	Surface	2		1.35		0.40	4784.30
50.00	4	Surface	2		1.35		0.40	12704.20
276.00	5	Surface	2		2.85		0.39	517.20
291.96	6	Surface	2		2.85		0.39	4558.00
292.06	6	Surface	2	4.89		0.47		

Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

- 3

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
292.08	6	Surface	2	3.09		0.31		
292.10	6	Surface	2	0.57		0.39		
297.00	7	Surface	2		3.93		0.39	517.20
310.00	8	Surface	2		3.93		0.39	4040.80
310.46	8	Surface	2	5.16		0.31		
310.56	8	Surface	2	3.92		0.56		
310.65	8	Surface	2	1.91		0.11		
310.83	8	Surface	2	4.74		0.58		
312.00	9	Surface	2		3.93		0.39	678.90
315.20	10	Surface	2	2.59	3.12	0.73	0.72	1487.00
315.25	10	Surface	2	3.64		0.70		
318.19	11	Surface	2	3.10	3.10	0.55	0.55	3652.90
321.57	12	Surface	2	2.14	1.89	1.55	1.02	2230.50
321.61	12	Surface	2	1.64		0.49		
325.61	13	Surface	2	1.62	1.66	0.39	0.40	5398.50
325.65	13	Surface	2	1.57		0.36		
325.81	13	Surface	2	1.79		0.46		
363.38	14	Surface	2	1.60	1.60	0.59	0.59	4202.40
17.35	1	Tile	2		0.93		0.89	342.00
32.56	2	Tile	2	0.93	0.93	0.89	0.89	285.00
72.66	3	Tile	2	0.33	0.33	0.81	0.81	1533.00
84.39	4	Tile	2	0.34	0.33	0.71	0.63	8658.00
84.66	4	Tile	2	0.30		0.56		
85.42	4	Tile	2	0.36		0.63		
94.88	5	Tile	2		0.33		0.63	2439.00
97.92	6	Tile	2	0.60	0.60	1.25	1.25	5245.00
114.31	7	Tile	2		0.60		1.25	117.00
136.85	8	Tile	2		0.60		1.25	114.00
154.27	9	Tile	2	0.25	0.25	0.18	0.18	1126.00
192.96	10	Tile	2	16.96	16.96	2.16	2.16	343.00
267.10	11	Tile	2		1.88		1.60	211.00
267.13	11	Tile	2					
267.38	11	Tile	2	1.88		1.60		
276.41	12	Tile	2	2.52	1.96	0.91	0.84	4273.00
276.43	12	Tile	2	2.74		0.59		
276.44	12	Tile	2	1.11		1.28		
276.60	12	Tile	2	2.78		1.10		
277.44	12	Tile	2	0.64		0.32		
291.92	13	Tile	2	2.38	3.19	1.41	1.04	11545.00
291.96	13	Tile	2	1.81		1.15		

Appendix 1B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
292.08	13	Tile	2	3.56		0.66		
292.10	13	Tile	2	3.79		1.27		
292.15	13	Tile	2	4.20		0.76		
292.38	13	Tile	2	4.26		1.46		
292.67	13	Tile	2	2.33		0.56		
297.74	14	Tile	2	1.26	1.78	0.79	0.63	7719.00
297.77	14	Tile	2	2.27		0.46		
310.38	15	Tile	2	3.77	3.31	1.56	1.05	9563.00
310.44	15	Tile	2	2.72		0.54		
310.56	15	Tile	2	3.53		1.16		
310.65	15	Tile	2	3.56		1.12		
310.83	15	Tile	2	4.88		1.08		
311.33	15	Tile	2	2.11		1.63		
312.40	15	Tile	2	2.57		0.23		
315.20	16	Tile	2		2.44		0.51	3671.00
315.24	16	Tile	2	1.39		0.27		
315.26	16	Tile	2	2.93		0.46		
315.46	16	Tile	2	3.00		0.79		
318.19	17	Tile	2	2.42	2.42	0.62	0.62	6547.00
321.58	18	Tile	2	2.37	2.37	0.26	0.26	3947.00
325.63	19	Tile	2	2.30	1.60	1.79	0.74	6419.00
325.83	19	Tile	2	1.76		0.21		
326.40	19	Tile	2	0.73		0.23		
359.68	20	Tile	2	0.82	1.94	0.45	0.66	8554.00
362.46	20	Tile	2	0.48		0.36		
363.38	20	Tile	2	4.51		1.17		

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
17.40	1	Surface	1	1.02	1.02	0.22	0.22	8889.70
32.56	2	Surface	1	1.75	1.75	0.51	0.51	2909.40
48.00	3	Surface	1		1.75		0.51	2327.50
50.00	4	Surface	1		1.75		0.51	14837.80
276	5	Surface	1	1.35	1.35		0.00	0.00
291	6	Surface	1	0.65		0.21		
291	6	Surface	1	1.34	1.75	0.31	0.32	4655.00
292	6	Surface	1					
292	6	Surface	1	3.21		0.82		
292	6	Surface	1	2.07		0.26		
292	6	Surface	1	3.29		0.04		
297	7	Surface	1		0.00		0.00	0.00
310	8	Surface	1		2.77		0.43	2780.10
310	8	Surface	1	0.68		0.15		
311	8	Surface	1	3.11		0.30		
311	8	Surface	1	3.04		0.56		
311	8	Surface	1	4.26		0.72		
312	9	Surface	1		2.77		0.43	323.30
315	10	Surface	1	2.87	2.91	0.33	0.38	1260.70
315	10	Surface	1	2.94		0.42		
318	11	Surface	1	1.53	1.53	0.59	0.59	2650.80
322	12	Surface	1	1.87	1.87	1.39	1.02	743.50
322	12	Surface	1	1.87		0.65		
325	13	Surface	1	0.61		0.40	0.41	
325	13	Surface	1	1.52	1.11	0.38		4428.70
326	13	Surface	1	0.64		0.25		
326	13	Surface	1	1.58		0.50		
326	13	Surface	1	1.18		0.53		
363	14	Surface	1	1.85	1.85	0.30	0.30	1519.30
17.35	1	Tile	1		2.34		0.49	498.00
32.56	2	Tile	1	2.34	2.34	0.49	0.49	2363.00
73	3	Tile	1	0.05	0.05	0.19	0.19	1967.00
84	4	Tile	1	0.59	0.58	0.87	0.75	8725.00
85	4	Tile	1	0.41		0.66		
85	4	Tile	1	0.75		0.72		
95	5	Tile	1		0.58		0.75	2898.00
98	6	Tile	1	0.84	0.84	1.52	1.52	6755.00
114	7	Tile	1		0.84		1.52	156.00
137	8	Tile	1		0.84		1.52	62.00
154	9	Tile	1	26.39	26.39	3.04	3.04	478.00

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
193	10	Tile	1	5.49	5.49	1.02	1.02	36.00
267	11	Tile	1		1.60		2.15	184.00
267	11	Tile	1	2.00		2.75		
267	11	Tile	1					
267	11	Tile	1	1.20		1.55		
276	12	Tile	1	1.65	1.44	0.51	1.11	2104.00
276	12	Tile	1	1.31		0.73		
276	12	Tile	1	1.72		1.10		
277	12	Tile	1	1.06		2.10		
277	12	Tile	1					
292	13	Tile	1	2.50	2.08	1.54	1.01	13155.00
292	13	Tile	1	1.33		0.26		
292	13	Tile	1	2.70		1.13		
292	13	Tile	1	1.19		0.93		
292	13	Tile	1	2.86		1.48		
292	13	Tile	1	2.59		1.20		
293	13	Tile	1	1.37		0.50		
298	14	Tile	1	1.55	1.68	1.01	1.03	7500.00
298	14	Tile	1	1.80		1.04		
310	15	Tile	1	1.54	2.44	1.23	1.04	17766.00
310	15	Tile	1	2.64		1.49		
311	15	Tile	1	2.69		1.46		
311	15	Tile	1	2.85		1.11		
311	15	Tile	1	3.49		1.29		
311	15	Tile	1	2.20		0.26		
312	15	Tile	1	1.64		0.41		
315	16	Tile	1	0.93	1.55	0.81	0.84	6742.00
315	16	Tile	1	1.84		1.38		
315	16	Tile	1	2.13		0.62		
315	16	Tile	1	1.29		0.53		
318	17	Tile	1	1.43	1.43	1.00	1.00	12614.00
322	18	Tile	1	2.65	2.65	0.59	0.59	6706.00
326	19	Tile	1	2.38	1.98	0.71	0.60	13074.00
326	19	Tile	1	2.17		0.72		
326	19	Tile	1	1.40		0.36		
360	20	Tile	1	0.76	0.88	0.70	0.67	13081.00
362	20	Tile	1	0.52		0.61		
363	20	Tile	1	1.35		0.70		
17.40	1	Surface	2	0.31	0.31	0.01	0.01	14870.10
32.56	2	Surface	2	1.13	1.13	0.38	0.38	13900.30

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
48.00	3	Surface	2		1.13		0.38	6659.20
50.00	4	Surface	2		1.13		0.38	16712.70
278	5	Surface	2	0.62	0.62		0.46	937.50
291	6	Surface	2	2.17	1.75	0.07	0.46	13253.80
291	6	Surface	2	0.13		0.98		
292	6	Surface	2					
292	6	Surface	2	1.49		0.16		
292	6	Surface	2	1.97		0.10		
292	6	Surface	2	2.99		0.98		
297	7	Surface	2		1.75		0.46	3620.50
310	8	Surface	2		2.72		0.28	5786.40
310	8	Surface	2	3.09		0.27		
311	8	Surface	2	1.98		0.16		
311	8	Surface	2	2.39		0.39		
311	8	Surface	2	3.42		0.29		
312	9	Surface	2		2.72		0.28	1099.10
315	10	Surface	2	1.27	1.99	0.21	0.29	1131.40
315	10	Surface	2	2.71		0.37		
318	11	Surface	2	2.66	2.66	0.39	0.39	3588.20
322	12	Surface	2	0.69	1.28	0.27	0.33	6626.90
322	12	Surface	2	1.87		0.39		
326	13	Surface	2	0.87	0.70	0.21	0.22	8113.90
326	13	Surface	2	0.67		0.20		
326	13	Surface	2	0.57		0.25		
363	14	Surface	2	1.61	1.61	0.26	0.26	9180.70
17.35	1	Tile	2		0.86		0.47	565.00
32.56	2	Tile	2	0.86	0.86	0.47	0.47	1101.00
73	3	Tile	2	0.40	0.40	0.69	0.69	2169.00
84	4	Tile	2	0.18	0.29	0.31	0.38	8327.00
85	4	Tile	2	0.38		0.39		
85	4	Tile	2	0.30		0.44		
95	5	Tile	2		0.29		0.75	2095.00
98	6	Tile	2	0.65	0.65	0.75	0.75	4896.00
114	7	Tile	2		0.65		0.75	156.00
137	8	Tile	2		0.65		0.75	74.00
154	9	Tile	2	18.84	18.84	6.41	6.41	759.00
193	10	Tile	2	13.21	13.21	1.02	1.02	305.00
267	11	Tile	2	1.67	1.39	0.69	0.88	2298.00
267	11	Tile	2	1.38		0.99		
267	11	Tile	2					

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
267	11	Tile	2	1.13		0.96		
276	12	Tile	2	1.54	1.48	0.36	0.43	6084.00
276	12	Tile	2	2.08		0.45		
276	12	Tile	2	1.59		0.68		
277	12	Tile	2	1.61		0.35		
277	12	Tile	2	0.58		0.30		
292	13	Tile	2	2.20	1.52	0.64	0.44	11490.00
292	13	Tile	2	0.96		0.26		
292	13	Tile	2	1.85		0.45		
292	13	Tile	2	1.07		0.55		
292	13	Tile	2	1.88		0.51		
292	13	Tile	2	1.48		0.28		
293	13	Tile	2	1.19		0.38		
298	14	Tile	2	0.97	1.63	0.20	0.20	8170.00
298	14	Tile	2	2.29		0.19		
310	15	Tile	2	7.54	2.72	0.80	0.36	10271.00
310	15	Tile	2	2.40		0.26		
311	15	Tile	2	1.93		0.48		
311	15	Tile	2	2.56		0.39		
311	15	Tile	2	2.37		0.36		
311	15	Tile	2	1.28		0.05		
312	15	Tile	2	0.93		0.14		
315	16	Tile	2	1.82	1.82	0.25	0.35	4516.00
315	16	Tile	2	2.20		0.68		
315	16	Tile	2	1.87		0.25		
315	16	Tile	2	1.39		0.22		
318	17	Tile	2	1.32	1.32	0.22	0.22	7974.00
322	18	Tile	2	0.77	0.77	0.22	0.22	4886.00
326	19	Tile	2	1.56	1.53	1.14	0.51	8299.00
326	19	Tile	2	2.42		0.21		
326	19	Tile	2	0.61		0.18		
360	20	Tile	2	0.51	0.60	0.15	0.20	8176.00
362	20	Tile	2	0.37		0.21		
363	20	Tile	2	0.93		0.24		
17.40	1	Surface	1	0.22	0.22			8889.70
32.56	2	Surface	1	0.51	0.51			2909.40
48.00	3	Surface	1		0.51			2327.50
50.00	4	Surface	1		0.51			14837.80
276	5	Surface	1		0.00			0.00
291	6	Surface	1	0.21				

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
291	6	Surface	1	0.31	0.32			4655.00
292	6	Surface	1					
292	6	Surface	1	0.82				
292	6	Surface	1	0.26				
292	6	Surface	1	0.04				
297	7	Surface	1		0.00			0.00
310	8	Surface	1		0.43			2780.10
310	8	Surface	1	0.15				
311	8	Surface	1	0.30				
311	8	Surface	1	0.56				
311	8	Surface	1	0.72				
312	9	Surface	1		0.43			323.30
315	10	Surface	1	0.33	0.38			1260.70
315	10	Surface	1	0.42				
318	11	Surface	1	0.59	0.59			2650.80
322	12	Surface	1	1.39	1.02			743.50
322	12	Surface	1	0.65				
325	13	Surface	1	0.40	0.41			4428.70
325	13	Surface	1	0.38				
326	13	Surface	1	0.25				
326	13	Surface	1	0.50				
326	13	Surface	1	0.53				
363	14	Surface	1	0.30	0.30			1519.30
17.35	1	Tile	1		0.49			498.00
32.56	2	Tile	1	0.49	0.49			2363.00
73	3	Tile	1	0.19	0.19			1967.00
84	4	Tile	1	0.87	0.75			8725.00
85	4	Tile	1	0.66				
85	4	Tile	1	0.72				
95	5	Tile	1		0.75			2898.00
98	6	Tile	1	1.52	1.52			6755.00
114	7	Tile	1		1.52			156.00
137	8	Tile	1		1.52			62.00
154	9	Tile	1	3.04	3.04			478.00
193	10	Tile	1	1.02	1.02			36.00
267	11	Tile	1		2.15			184.00
267	11	Tile	1	2.75				
267	11	Tile	1					
267	11	Tile	1	1.55				
276	12	Tile	1	0.51	1.11			2104.00

Appendix 2B. Surface and subsurface atrazine and de-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
276	12	Tile	1	0.73				
276	12	Tile	1	1.10				
277	12	Tile	1	2.10				
277	12	Tile	1					
292	13	Tile	1	1.54	1.01			13155.00
292	13	Tile	1	0.26				
292	13	Tile	1	1.13				
292	13	Tile	1	0.93				
292	13	Tile	1	1.48				
292	13	Tile	1	1.20				
293	13	Tile	1	0.50				
298	14	Tile	1	1.01	1.03			7500.00
298	14	Tile	1	1.04				
310	15	Tile	1	1.23	1.04			17766.00
310	15	Tile	1	1.49				
311	15	Tile	1	1.46				
311	15	Tile	1	1.11				
311	15	Tile	1	1.29				
311	15	Tile	1	0.26				
312	15	Tile	1	0.41				
315	16	Tile	1	0.81	0.84			6742.00
315	16	Tile	1	1.38				
315	16	Tile	1	0.62				
315	16	Tile	1	0.53				
318	17	Tile	1	1.00	1.00			12614.00
322	18	Tile	1	0.59	0.59			6706.00
326	19	Tile	1	0.71	0.60			13074.00
326	19	Tile	1	0.72				
326	19	Tile	1	0.36				
360	20	Tile	1	0.70	0.67			13081.00
362	20	Tile	1	0.61				
363	20	Tile	1	0.70				
17.40	1	Surface	2	0.01	0.01			14870.10
32.56	2	Surface	2	0.38	0.38			13900.30
48.00	3	Surface	2		0.38			6659.20
50.00	4	Surface	2		0.38			16712.70
276	5	Surface	2		0.46			937.50
291	6	Surface	2	0.07	0.46			13253.80
291	6	Surface	2	0.98				

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
292	6	Surface	2					
292	6	Surface	2	0.16				
292	6	Surface	2	0.10				
292	6	Surface	2	0.98				
297	7	Surface	2		0.46			3620.50
310	8	Surface	2		0.28			5786.40
310	8	Surface	2	0.27				
311	8	Surface	2	0.16				
311	8	Surface	2	0.39				
311	8	Surface	2	0.29				
312	9	Surface	2		0.28			1099.10
315	10	Surface	2	0.21	0.29			1131.40
315	10	Surface	2	0.37				
318	11	Surface	2	0.39	0.39			3588.20
322	12	Surface	2	0.27	0.33			6626.90
322	12	Surface	2	0.39				
326	13	Surface	2	0.21	0.22			8113.90
326	13	Surface	2	0.20				
326	13	Surface	2	0.25				
363	14	Surface	2	0.26	0.26			9180.70
17.35	1	Tile	2		0.47			565.00
32.56	2	Tile	2	0.47	0.47			1101.00
73	3	Tile	2	0.69	0.69			2169.00
84	4	Tile	2	0.31	0.38			8327.00
85	4	Tile	2	0.39				
85	4	Tile	2	0.44				
95	5	Tile	2		0.75			2095.00
98	6	Tile	2	0.75	0.75			4896.00
114	7	Tile	2		0.75			156.00
137	8	Tile	2		0.75			74.00
154	9	Tile	2	6.41	6.41			759.00
193	10	Tile	2	1.02	1.02			305.00
267	11	Tile	2	0.69	0.88			2298.00
267	11	Tile	2	0.99				
267	11	Tile	2					
267	11	Tile	2	0.96				
276	12	Tile	2	0.36	0.43			6084.00
276	12	Tile	2	0.45				
276	12	Tile	2	0.68				
277	12	Tile	2	0.35				

Appendix 2B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
277	12	Tile	2	0.30				
292	13	Tile	2	0.64	0.44			11490.00
292	13	Tile	2	0.26				
292	13	Tile	2	0.45				
292	13	Tile	2	0.55				
292	13	Tile	2	0.51				
292	13	Tile	2	0.28				
293	13	Tile	2	0.38				
298	14	Tile	2	0.20	0.20			8170.00
298	14	Tile	2	0.19				
310	15	Tile	2	0.80	0.36			10271.00
310	15	Tile	2	0.26				
311	15	Tile	2	0.48				
311	15	Tile	2	0.39				
311	15	Tile	2	0.36				
311	15	Tile	2	0.05				
312	15	Tile	2	0.14				
315	16	Tile	2	0.25	0.35			4516.00
315	16	Tile	2	0.68				
315	16	Tile	2	0.25				
315	16	Tile	2	0.22				
318	17	Tile	2	0.22	0.22			7974.00
322	18	Tile	2	0.22	0.22			4886.00
326	19	Tile	2	1.14	0.51			8299.00
326	19	Tile	2	0.21				
326	19	Tile	2	0.18				
360	20	Tile	2	0.15	0.20			8176.00
362	20	Tile	2	0.21				
363	20	Tile	2	0.24				

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
17.40	1	Surface	1	0.13	0.13	0.02	0.02	4719.60
32.56	2	Surface	1	7.36	7.36	3.28	3.28	3200.30
48.00	3	Surface	1		0.00		0.00	0.00
50.00	4	Surface	1		7.36		3.28	7629.00
276.00	5	Surface	1		0.00		0.00	0.00
291.96	6	Surface	1		2.76		1.19	258.60
292.06	6	Surface	1	2.51				
292.08	6	Surface	1					
292.10	6	Surface	1	3.01		1.19		
297.00	7	Surface	1		0.00		0.00	0.00
310.46	8	Surface	1		2.76		1.19	549.50
310.56	8	Surface	1					
310.65	8	Surface	1					
310.83	8	Surface	1					
312.00	9	Surface	1		0.00		0.00	0.00
315.20	10	Surface	1		0.00		0.00	0.00
315.25	10	Surface	1					
318.19	11	Surface	1		2.76		1.19	678.90
321.57	12	Surface	1		6.45		1.19	226.30
321.61	12	Surface	1					
325.61	13	Surface	1		6.45		1.68	1777.90
325.65	13	Surface	1					
325.81	13	Surface	1	6.45		1.68		
363.38	14	Surface	1	0.27	0.27	0.15	0.15	1519.30
17.35	1	Tile	1		1.36		0.62	662.00
32.56	2	Tile	1	1.36	1.36	0.62	0.62	1709.00
72.66	3	Tile	1	1.32	1.32	1.41	1.41	1967.00
84.39	4	Tile	1	0.60	1.35	0.73	1.21	11904.00
84.66	4	Tile	1	1.30		1.36		
85.42	4	Tile	1	2.15		1.53		
94.88	5	Tile	1		1.35		1.21	2187.00
97.92	6	Tile	1	1.09	1.09	1.33	1.33	5829.00
114.31	7	Tile	1		1.09		1.33	104.00
136.85	8	Tile	1		1.09		1.33	74.00
154.27	9	Tile	1	0.31	0.31	0.41	0.41	855.00
192.96	10	Tile	1	8.93	8.93	1.36	1.36	59.00
267.13	11	Tile	1		0.00		0.00	0.00
276.41	12	Tile	1	1.50	1.19	0.68	0.53	396.00
276.43	12	Tile	1	1.21		0.50		
276.44	12	Tile	1	1.28		0.52		

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
276.60	12	Tile	1	0.78		0.41		
291.92	13	Tile	1	5.73	2.47	0.77	0.82	10903.00
291.96	13	Tile	1	1.60		0.21		
292.06	13	Tile	1	2.31		0.78		
292.10	13	Tile	1	2.73		1.19		
292.15	13	Tile	1	2.86		1.95		
292.38	13	Tile	1	1.41		0.39		
292.67	13	Tile	1	0.68		0.46		
297.74	14	Tile	1	1.66	1.63	0.73	0.66	6267.00
297.77	14	Tile	1	1.59		0.58		
310.38	15	Tile	1	5.22	4.30	1.63	1.33	13888.00
310.44	15	Tile	1	5.90		2.36		
310.56	15	Tile	1	4.12		1.61		
310.65	15	Tile	1	4.33		1.13		
310.83	15	Tile	1	5.44		1.44		
311.33	15	Tile	1	2.94		0.41		
312.40	15	Tile	1	2.17		0.72		
315.20	16	Tile	1	3.82	4.54	1.39	1.53	8362.00
315.24	16	Tile	1	3.96		1.85		
315.28	16	Tile	1	4.92		1.20		
315.46	16	Tile	1	5.45		1.66		
318.19	17	Tile	1	4.45	4.45	1.54	1.54	17218.00
321.58	18	Tile	1	3.24	3.24	0.68	0.68	10156.00
325.63	19	Tile	1	3.97	3.95	1.31	1.05	19335.00
325.83	19	Tile	1	4.87		1.35		
326.40	19	Tile	1	3.02		0.49		
359.68	20	Tile	1	1.45	1.67	0.48	0.58	18810.00
362.46	20	Tile	1	0.81		0.41		
363.38	20	Tile	1	2.75		0.84		
17.40	1	Surface	2	0.21	0.21	0.07	0.07	9697.90
32.56	2	Surface	2	0.60	0.60	0.51	0.51	4784.30
48.00	3	Surface	2		0.60		0.51	4687.30
50.00	4	Surface	2		0.60		0.51	9019.00
276.00	5	Surface	2	1.60	1.60		0.00	549.50
291.96	6	Surface	2		3.86		1.45	2812.40
292.06	6	Surface	2					
292.08	6	Surface	2	2.73		0.82		
292.10	6	Surface	2	4.99		2.07		
297.00	7	Surface	2		3.86		1.45	517.20
310.46	8	Surface	2		0.00		0.00	0.00

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988 - 3

Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
310.56	8	Surface	2					
310.65	8	Surface	2					
310.83	8	Surface	2					
312.00	9	Surface	2		0.00		0.00	0.00
315.20	10	Surface	2	4.65	5.22	0.73	0.62	7435.00
315.25	10	Surface	2	5.79		0.50		
318.19	11	Surface	2	2.14	2.14	0.53	0.53	3135.70
321.57	12	Surface	2	2.52	2.26	0.84	0.67	3168.00
321.61	12	Surface	2	2.00		0.49		
325.61	13	Surface	2	1.35	2.25	0.27	0.37	6562.20
325.65	13	Surface	2	2.59		0.47		
325.81	13	Surface	2	2.82		0.36		
363.38	14	Surface	2	2.88		0.52		
363.38	14	Surface	2	1.08	1.98	0.38	0.45	3620.50
17.35	1	Tile	2		0.16		0.10	347.00
32.56	2	Tile	2	0.16	0.16	0.10	0.10	359.00
72.66	3	Tile	2	0.69	0.69	0.34	0.34	781.00
84.39	4	Tile	2	0.59	0.88	0.36	0.44	8099.00
84.66	4	Tile	2	0.97		0.49		
85.42	4	Tile	2	1.08		0.46		
94.88	5	Tile	2		0.88		0.44	1515.00
97.92	6	Tile	2	0.43	0.43	0.27	0.27	3477.00
114.31	7	Tile	2		0.43		0.27	65.00
136.85	8	Tile	2		0.43		0.27	74.00
154.27	9	Tile	2	0.19	0.19	0.11	0.11	464.00
192.96	10	Tile	2		0.19		0.11	33.00
267.13	11	Tile	2		0.00		0.00	0.00
276.41	12	Tile	2	1.68	1.23	0.32	0.33	144.00
276.43	12	Tile	2	0.99		0.36		
276.44	12	Tile	2	1.06		0.47		
276.60	12	Tile	2	1.17		0.17		
291.92	13	Tile	2		0.83		0.34	8411.00
291.96	13	Tile	2	0.64		0.10		
292.06	13	Tile	2	1.21		0.34		
292.10	13	Tile	2	0.67		0.46		
292.15	13	Tile	2	1.25		0.47		
292.38	13	Tile	2	0.88		0.40		
292.67	13	Tile	2	0.34		0.26		
297.74	14	Tile	2	0.80	0.92	0.30	0.31	6466.00
297.77	14	Tile	2	1.03		0.31		

Appendix 3B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1988

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Julian Time/88	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
310.38	15	Tile	2	0.36	2.84	0.31	0.87	10634.00
310.44	15	Tile	2	0.94		0.17		
310.58	15	Tile	2	2.86		0.39		
310.65	15	Tile	2	2.41		0.13		
310.83	15	Tile	2	5.09		0.54		
311.33	15	Tile	2	3.63		0.14		
312.40	15	Tile	2	4.56		4.41		
315.20	16	Tile	2	2.34	3.13	0.54	0.54	6103.00
315.24	16	Tile	2	2.31		0.70		
315.28	16	Tile	2	3.49		0.36		
315.46	16	Tile	2	4.36		0.57		
318.19	17	Tile	2	2.73	2.73	0.43	0.43	8574.00
321.58	18	Tile	2	2.49	2.49	0.29	0.29	5487.00
325.63	19	Tile	2	2.49	1.90	1.88	0.78	8460.00
325.83	19	Tile	2	1.37		0.26		
326.40	19	Tile	2	1.83		0.23		
359.68	20	Tile	2	1.56	1.23	0.38	0.30	10183.00
362.46	20	Tile	2	0.46		0.12		
363.38	20	Tile	2	1.67		0.39		

Appendix 4B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
17.40	1	Surface	1	11475.90	100.99	145.74	30.71
32.56	2	Surface	1	4913.60	140.04	199.49	29.80
48.00	3	Surface	1	1971.90	58.20	80.06	29.80
50.00	4	Surface	1	10732.30	305.87	435.73	29.80
276.00	5	Surface	1	0.00	0.00	0.00	
291.96	6	Surface	1	2424.50	79.36	84.45	6.03
297.00	7	Surface	1	0.00	0.00	0.00	
310.00	8	Surface	1	3814.50	127.97	142.91	10.45
312.00	9	Surface	1	614.20	20.61	23.01	10.45
315.20	10	Surface	1	1777.90	43.47	50.31	13.60
318.19	11	Surface	1	2877.00	59.27	79.98	25.90
321.57	12	Surface	1	1390.00	21.89	31.55	30.62
325.61	13	Surface	1	4525.70	103.34	124.76	17.17
363.38	14	Surface	1	1390.00	57.69	63.94	9.78
17.35	1	Tile	1	0.00	0.00	0.00	
32.56	2	Tile	1	1329.00	11.56	22.73	49.12
72.66	3	Tile	1	1735.00	4.16	11.80	64.71
84.39	4	Tile	1	8651.00	28.26	73.25	61.42
94.88	5	Tile	1	3034.00	9.91	25.69	61.42
97.92	6	Tile	1	7232.00	43.39	117.88	63.19
114.31	7	Tile	1	39.00	0.23	0.64	63.19
136.85	8	Tile	1	48.00	0.29	0.78	63.19
154.27	9	Tile	1	117.00	16.88	18.81	10.26
192.96	10	Tile	1	270.00	49.65	56.40	11.97
267.10	11	Tile	1	151.00	1.81	3.38	46.43
276.41	12	Tile	1	2830.00	46.34	75.56	38.67
291.92	13	Tile	1	14323.00	440.13	586.42	24.95
297.74	14	Tile	1	4590.00	86.29	105.57	18.26
310.38	15	Tile	1	18406.00	580.38	741.15	21.69
315.20	16	Tile	1	6282.00	73.34	112.92	35.05
318.19	17	Tile	1	9131.00	132.40	206.36	35.84
321.58	18	Tile	1	5646.00	99.37	123.65	19.63
325.63	19	Tile	1	8789.00	107.81	145.31	25.81
359.68	20	Tile	1	12926.00	125.86	184.89	31.93
17.40	1	Surface	2	17100.60	71.82	87.21	17.65
32.56	2	Surface	2	0.00	0.00	0.00	
48.00	3	Surface	2	4784.30	64.59	83.73	22.86
50.00	4	Surface	2	12704.20	171.51	222.32	22.86
276.00	5	Surface	2	517.20	14.74	16.76	12.04
291.96	6	Surface	2	4558.00	129.90	147.68	12.04
297.00	7	Surface	2	517.20	20.34	22.36	9.02

Appendix 4B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
310.00	8	Surface	2	4040.80	158.90	174.66	9.02
312.00	9	Surface	2	678.90	26.70	29.35	9.02
315.20	10	Surface	2	1487.00	46.32	56.95	18.67
318.19	11	Surface	2	3652.90	113.24	133.33	15.07
321.57	12	Surface	2	2230.50	42.16	64.91	35.05
325.61	13	Surface	2	5398.50	89.62	111.39	19.55
363.38	14	Surface	2	4202.40	67.24	92.03	26.94
17.35	1	Tile	2	342.00	3.18	6.22	48.90
32.56	2	Tile	2	285.00	2.65	5.19	48.90
72.66	3	Tile	2	1533.00	5.06	17.48	71.05
84.39	4	Tile	2	8658.00	26.86	83.69	65.52
94.88	5	Tile	2	2439.00	8.13	23.58	65.52
97.92	6	Tile	2	5245.00	31.47	97.03	67.57
114.31	7	Tile	2	117.00	0.70	2.16	67.57
136.85	8	Tile	2	114.00	0.68	2.11	67.57
154.27	9	Tile	2	1126.00	2.82	4.84	41.86
192.96	10	Tile	2	343.00	58.17	65.58	11.30
267.10	11	Tile	2	211.00	3.97	7.34	45.98
276.41	12	Tile	2	4273.00	83.67	119.56	30.02
291.92	13	Tile	2	11545.00	368.29	488.19	24.56
297.74	14	Tile	2	7719.00	137.01	185.26	26.04
310.38	15	Tile	2	9563.00	316.07	416.06	24.03
315.20	16	Tile	2	3671.00	89.57	108.17	17.19
318.19	17	Tile	2	6547.00	158.44	199.03	20.39
321.58	18	Tile	2	3947.00	93.54	103.81	9.89
325.63	19	Tile	2	6419.00	102.45	150.13	31.76
359.68	20	Tile	2	8554.00	165.75	222.08	25.36

Appendix 5B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
17.40	1	Surface	1	8889.70	90.67	110.23	17.74
32.56	2	Surface	1	2909.40	50.91	65.75	22.57
48.00	3	Surface	1	2327.50	40.73	52.60	22.57
50.00	4	Surface	1	14837.80	259.66	335.33	22.57
276	5	Surface	1	0.00	0.00	0.00	
291	6	Surface	1	4655.00	81.56	96.45	15.44
297	7	Surface	1	0.00	0.00	0.00	
310	8	Surface	1	2780.10	77.08	89.10	13.49
312	9	Surface	1	323.30	8.96	10.36	13.49
315	10	Surface	1	1260.70	36.62	41.35	11.43
318	11	Surface	1	2650.80	40.56	56.20	27.83
322	12	Surface	1	743.50	13.90	21.49	35.29
325	13	Surface	1	4428.70	48.98	67.23	27.14
363	14	Surface	1	1519.30	28.11	32.66	13.95
17.35	1	Tile	1	498.00	11.65	14.09	17.31
32.56	2	Tile	1	2363.00	55.29	66.87	17.31
73	3	Tile	1	1987.00	0.98	4.72	79.17
84	4	Tile	1	8725.00	50.90	116.33	56.25
95	5	Tile	1	2898.00	16.91	38.64	56.25
98	6	Tile	1	6755.00	58.74	159.42	64.41
114	7	Tile	1	156.00	1.31	3.68	64.41
137	8	Tile	1	62.00	0.52	1.46	64.41
154	9	Tile	1	478.00	126.14	140.68	10.33
193	10	Tile	1	36.00	1.98	2.34	15.67
267	11	Tile	1	184.00	2.94	6.90	57.33
276	12	Tile	1	2104.00	30.19	53.55	43.61
292	13	Tile	1	13155.00	273.25	405.55	32.62
298	14	Tile	1	7500.00	125.63	202.50	37.96
310	15	Tile	1	17766.00	432.75	616.85	29.84
315	16	Tile	1	6742.00	104.33	160.63	35.05
318	17	Tile	1	12614.00	180.38	306.52	41.15
322	18	Tile	1	6706.00	177.71	217.27	18.21
326	19	Tile	1	13074.00	259.30	337.31	23.13
360	20	Tile	1	13081.00	114.64	202.43	43.37
17.40	1	Surface	2	14870.10	46.10	47.58	3.13
32.56	2	Surface	2	13900.30	157.07	209.89	25.17
48.00	3	Surface	2	6659.20	75.25	100.55	25.17
50.00	4	Surface	2	16712.70	188.85	252.36	25.17
276	5	Surface	2	937.50	5.81	10.11	42.49
291	6	Surface	2	13253.80	231.94	292.64	20.74
297	7	Surface	2	3620.50	63.36	79.94	20.74

Appendix 5B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1988 - 2

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
310	8	Surface	2	5786.40	157.36	173.36	9.23
312	9	Surface	2	1099.10	29.89	32.93	9.23
315	10	Surface	2	1131.40	22.51	25.80	12.72
318	11	Surface	2	3588.20	95.45	109.44	12.79
322	12	Surface	2	6626.90	84.82	106.69	20.50
326	13	Surface	2	8113.90	57.07	74.92	23.83
363	14	Surface	2	9180.70	147.81	171.68	13.90
17.35	1	Tile	2	565.00	4.86	7.51	35.34
32.56	2	Tile	2	1101.00	9.47	14.64	35.34
73	3	Tile	2	2169.00	8.68	23.64	63.30
84	4	Tile	2	8327.00	23.87	55.51	57.00
95	5	Tile	2	2095.00	6.01	21.72	72.35
98	6	Tile	2	4896.00	31.82	68.54	53.57
114	7	Tile	2	156.00	1.01	2.18	53.57
137	8	Tile	2	74.00	0.48	1.04	53.57
154	9	Tile	2	759.00	143.00	191.65	25.39
193	10	Tile	2	305.00	40.29	43.40	7.17
267	11	Tile	2	2298.00	32.02	52.24	38.71
276	12	Tile	2	6084.00	89.80	115.84	22.48
292	13	Tile	2	11490.00	174.48	224.88	22.41
298	14	Tile	2	8170.00	133.17	149.10	10.68
310	15	Tile	2	10271.00	278.91	315.42	11.58
315	16	Tile	2	4516.00	82.19	98.00	16.13
318	17	Tile	2	7974.00	105.26	122.80	14.29
322	18	Tile	2	4886.00	37.62	48.37	22.22
326	19	Tile	2	8299.00	126.91	169.19	24.99
360	20	Tile	2	8176.00	49.35	65.73	4.92

Appendix 6B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
17.40	1	Surface	1	4719.60	6.14	7.08	13.33
32.56	2	Surface	1	3200.30	235.54	340.51	30.83
48.00	3	Surface	1	0.00	0.00	0.00	
50.00	4	Surface	1	7629.00	561.49	811.73	30.83
276.00	5	Surface	1	0.00	0.00	0.00	
291.96	6	Surface	1	258.60	7.14	10.21	30.13
297.00	7	Surface	1	0.00	0.00	0.00	
310.46	8	Surface	1	549.50	15.17	21.71	30.13
312.00	9	Surface	1	0.00	0.00	0.00	
315.20	10	Surface	1	0.00	0.00	0.00	
318.19	11	Surface	1	678.90	18.74	26.82	30.13
321.57	12	Surface	1	226.30	14.80	17.29	15.58
325.61	13	Surface	1	1777.90	114.67	144.54	20.66
363.38	14	Surface	1	1519.30	4.10	6.38	35.71
17.35	1	Tile	1	662.00	9.00	13.11	31.31
32.56	2	Tile	1	1709.00	23.24	33.84	31.31
72.66	3	Tile	1	1967.00	25.96	53.70	51.65
84.39	4	Tile	1	11904.00	160.70	304.35	47.20
94.88	5	Tile	1	2187.00	29.52	55.91	47.20
97.92	6	Tile	1	5829.00	63.54	141.06	54.96
114.31	7	Tile	1	104.00	1.13	2.52	54.96
136.85	8	Tile	1	74.00	0.81	1.79	54.96
154.27	9	Tile	1	855.00	2.65	6.16	56.94
192.96	10	Tile	1	59.00	5.27	6.07	13.22
267.13	11	Tile	1	0.00	0.00	0.00	
276.41	12	Tile	1	396.00	4.72	6.81	30.67
291.92	13	Tile	1	10903.00	269.77	359.33	24.92
297.74	14	Tile	1	6267.00	101.84	142.89	28.73
310.38	15	Tile	1	13688.00	597.48	781.93	23.59
315.20	16	Tile	1	8362.00	379.43	506.95	25.15
318.19	17	Tile	1	17218.00	766.20	1031.36	25.71
321.58	18	Tile	1	10156.00	329.05	398.12	17.35
325.63	19	Tile	1	19335.00	764.38	967.39	20.99
359.68	20	Tile	1	18810.00	313.98	422.18	25.63
17.40	1	Surface	2	9697.90	20.37	27.15	25.00
32.56	2	Surface	2	4784.30	28.71	53.11	45.95
48.00	3	Surface	2	4687.30	28.12	52.03	45.95
50.00	4	Surface	2	9019.00	54.11	100.11	45.95
276.00	5	Surface	2	549.50	8.79	8.79	0.00
291.96	6	Surface	2	2812.40	108.56	149.20	27.24
297.00	7	Surface	2	517.20	19.96	27.44	27.24

Appendix 6B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1988

- 2

Julian Time/88	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
310.46	8	Surface	2	0.00	0.00	0.00	
312.00	9	Surface	2	0.00	0.00	0.00	
315.20	10	Surface	2	7435.00	388.11	433.83	10.54
318.19	11	Surface	2	3135.70	67.10	83.72	19.85
321.57	12	Surface	2	3168.00	71.60	92.66	22.74
325.61	13	Surface	2	6562.20	147.87	171.93	13.99
363.38	14	Surface	2	3620.50	71.69	87.98	18.52
17.35	1	Tile	2	347.00	0.56	0.90	38.46
32.56	2	Tile	2	359.00	0.57	0.93	38.46
72.66	3	Tile	2	781.00	5.39	8.04	33.01
84.39	4	Tile	2	8099.00	71.27	106.64	33.16
94.88	5	Tile	2	1515.00	13.33	19.95	33.16
97.92	6	Tile	2	3477.00	14.95	24.34	38.57
114.31	7	Tile	2	65.00	0.28	0.46	38.57
136.85	8	Tile	2	74.00	0.32	0.52	38.57
154.27	9	Tile	2	464.00	0.88	1.39	36.67
192.96	10	Tile	2	33.00	0.06	0.10	36.67
267.13	11	Tile	2	0.00	0.00	0.00	
276.41	12	Tile	2	144.00	1.76	2.24	21.22
291.92	13	Tile	2	8411.00	69.95	98.41	28.92
297.74	14	Tile	2	6466.00	59.16	78.89	25.00
310.38	15	Tile	2	10634.00	301.62	394.04	23.46
315.20	16	Tile	2	6103.00	190.72	223.83	14.79
318.19	17	Tile	2	8574.00	234.07	270.94	13.61
321.58	18	Tile	2	5487.00	136.63	152.54	10.43
325.63	19	Tile	2	8460.00	160.56	226.84	29.22
359.68	20	Tile	2	10183.00	125.30	155.60	19.47

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
8	1	Surface	1	27.10	27.10	3.81	3.81	43446.60
26	2	Surface	1	1.96	1.96	0.75	0.75	0.00
93	3	Surface	1	1.72	1.72	0.54	0.54	4419.00
108	4	Surface	1	0.00	0.00	0.00	0.00	0.00
146	5	Surface	1	552.00	456.86	41.30	29.07	1839.40
146	5	Surface	1	390.00		20.40		
146	5	Surface	1	428.57		25.50		
146	5	Surface	1	0.00		0.00		
151	6	Surface	1	295.67	245.50	23.47	18.62	12135.30
151	6	Surface	1	445.81		29.34		
151	6	Surface	1	104.00		11.70		
152	6	Surface	1	252.00		16.50		
153	6	Surface	1	130.00		12.10		
155	7	Surface	1	131.00	156.32	4.65	7.87	2240.20
155	7	Surface	1	140.39		6.98		
155	7	Surface	1	197.58		11.99		
168	8	Surface	1	0.00	156.32	0.00	7.87	2405.10
169	8	Surface	1	0.00		0.00		
171	9	Surface	1	37.63	39.48	7.89	5.84	3539.70
171	9	Surface	1	41.33		3.98		
201	10	Surface	1	0.00	9.34	0.00	1.60	4842.50
201	10	Surface	1	9.34		1.60		
320	11	Surface	1	1.68	1.50	7.74	6.36	4790.80
320	11	Surface	1	1.32		4.97		
8	1	Tile	1	1.99	1.99	0.51	0.51	3987.00
26	2	Tile	1	2.43	2.43	0.90	0.90	1430.00
87	3	Tile	1	1.67	1.67	1.14	1.14	15214.00
93	4	Tile	1	2.30	2.30	0.77	0.77	17203.00
108	5	Tile	1	0.00	2.30	0.00	0.77	17197.00
145	6	Tile	1	266.67	221.31	23.53	14.48	15100.00
145	6	Tile	1	89.89		5.34		
146	6	Tile	1	284.71		26.10		
146	6	Tile	1	62.60		2.62		
146	6	Tile	1	376.00		18.60		
146	6	Tile	1	248.00		10.70		
147	6	Tile	1	0.00		0.00		
151	7	Tile	1	137.00	92.67	9.30	8.80	20421.00
151	7	Tile	1	168.00		15.30		
151	7	Tile	1	133.00		12.30		
152	7	Tile	1	62.20		8.16		

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
152	7	Tile	1	60.80		7.18		
153	7	Tile	1	47.43		4.59		
153	7	Tile	1	84.44		8.07		
153	7	Tile	1	48.51		5.53		
154	8	Tile	1	0.00	78.75	0.00	7.70	14564.00
155	8	Tile	1	68.20		7.53		
155	8	Tile	1	89.30		7.87		
167	9	Tile	1	39.10	31.28	4.87	6.44	10389.00
167	9	Tile	1	20.80		5.74		
168	9	Tile	1	0.00		0.00		
169	9	Tile	1	33.94		8.72		
171	10	Tile	1	43.46	40.77	8.82	8.98	6446.00
171	10	Tile	1	54.85		11.85		
171	10	Tile	1	24.00		6.28		
201	11	Tile	1	7.30	9.44	3.13	3.24	12157.00
201	11	Tile	1	6.46		2.16		
201	11	Tile	1	0.00		0.00		
201	11	Tile	1	15.06		3.16		
202	11	Tile	1	8.95		4.49		
320	12	Tile	1	1.84	1.74	3.73	2.87	12165.00
320	12	Tile	1	1.64		2.01		
8	1	Surface	2	3.23	3.23	0.40	0.40	57702.50
26	2	Surface	2	3.19	3.19	0.75	0.75	2886.70
93	3	Surface	2	0.90	0.90	0.30	0.30	4709.90
108	4	Surface	2	0.00	0.90	0.00	0.30	1548.40
146	5	Surface	2	544.00	550.28	33.80	32.22	1852.30
146	5	Surface	2	669.00		40.70		
146	5	Surface	2	293.00		19.50		
146	5	Surface	2	695.12		34.88		
151	6	Surface	2	322.12	257.24	21.13	18.09	12494.10
151	6	Surface	2	394.09		27.00		
151	6	Surface	2	190.00		14.50		
152	6	Surface	2	267.00		17.90		
153	6	Surface	2	113.00		9.91		
155	7	Surface	2	97.81	130.03	11.89	9.70	2637.80
155	7	Surface	2	155.17		9.30		
155	7	Surface	2	137.10		7.92		
168	8	Surface	2	0.00	130.03	0.00	9.70	2405.10
169	8	Surface	2	0.00		0.00		
171	9	Surface	2	0.00	130.03	0.00	9.70	3539.70

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

- 3

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
171	9	Surface	2	0.00		0.00		
201	10	Surface	2	20.83	13.63	4.93	2.90	4842.50
201	10	Surface	2	6.42		0.86		
320	11	Surface	2	1.06	1.18	5.92	4.52	4005.20
320	11	Surface	2	1.29		3.11		
8	1	Tile	2	1.53	1.53	0.30	0.30	2030.00
26	2	Tile	2	0.38	0.38	0.28	0.28	650.00
87	3	Tile	2	1.03	1.03	0.93	0.93	13065.00
93	4	Tile	2	1.09	1.09	0.94	0.94	16996.00
108	5	Tile	2	0.00	1.09	0.00	0.94	24588.00
145	6	Tile	2	216.67	219.09	22.06	16.31	9816.00
145	6	Tile	2	112.36		13.14		
146	6	Tile	2	247.51		21.90		
146	6	Tile	2	192.00		7.85		
146	6	Tile	2	332.00		18.60		
146	6	Tile	2	214.00		14.30		
147	6	Tile	2	0.00		0.00		
151	7	Tile	2	156.00	98.63	15.00	9.22	13274.00
151	7	Tile	2	157.00		8.59		
151	7	Tile	2	127.00		14.60		
152	7	Tile	2	66.30		13.10		
152	7	Tile	2	64.80		9.69		
153	7	Tile	2	32.89		3.59		
153	7	Tile	2	150.19		5.82		
153	7	Tile	2	34.89		3.40		
154	8	Tile	2	48.13	49.27	7.25	6.77	5073.00
155	8	Tile	2	50.40		6.28		
155	8	Tile	2	0.00		0.00		
167	9	Tile	2	48.88	31.94	13.46	9.22	4273.00
167	9	Tile	2	24.53		8.24		
168	9	Tile	2	0.00		0.00		
169	9	Tile	2	22.42		5.97		
171	10	Tile	2	33.73	37.06	7.90	8.40	13297.00
171	10	Tile	2	48.66		11.85		
171	10	Tile	2	28.80		5.44		
201	11	Tile	2	8.77	9.86	3.97	3.66	14816.00
201	11	Tile	2	11.30		4.09		
201	11	Tile	2	0.00		0.00		
201	11	Tile	2	9.66		1.94		
202	11	Tile	2	9.69		4.64		

Appendix 7B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
320	12	Tile	2	1.47	1.41	6.04	4.32	4390.00
320	12	Tile	2	1.35		2.59		

Appendix B8. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
8	1	Surface	1	0	2.46	0	1.13	3168
26	2	Surface	1	2	2.46	1	1.13	1196
93	3	Surface	1	2	2.25	1	0.59	4965
108	4	Surface	1	0	2.25	0	0.59	1093
146	5	Surface	1	437	553.20	39	35.26	4177
146	5	Surface	1	431		29		
146	5	Surface	1	564		44		
146	5	Surface	1	780		30		
151	6	Surface	1	385	263.02	38	26.46	15672
151	6	Surface	1	401		38		
151	6	Surface	1	133		19		
152	6	Surface	1	257		22		
153	6	Surface	1	139		17		
155	7	Surface	1	43	128.22	18	14.03	2389
155	7	Surface	1	123		11		
155	7	Surface	1	219		13		
167	8	Surface	1	0	128.22	0	14.03	1694
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
167	8	Surface	1	0		0		
168	8	Surface	1	0		0		
168	8	Surface	1	0		0		
169	8	Surface	1	0		0		
171	9	Surface	1	0	9.05	0	1.47	8482
171	9	Surface	1	9		2		
171	9	Surface	1	9		1		
201	10	Surface	1	0	9.85	0	1.80	5282
201	10	Surface	1	10		2		
320	11	Surface	1	2	1.65	6	5.45	4529
320	11	Surface	1	1		5		
8	1	Tile	1	3	2.72	1	0.83	4867
26	2	Tile	1	3	3.29	1	1.24	2999
87	3	Tile	1	1	1.00	1	1.10	15852
93	4	Tile	1	0	0.46	1	0.59	20744
108	5	Tile	1	0	0.46	0	0.59	17585

Appendix B8. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

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Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
145	6	Tile	1	153	156.06	18	15.60	11978
145	6	Tile	1	185		7		
146	6	Tile	1	315		29		
146	6	Tile	1	35		4		
146	6	Tile	1	205		18		
146	6	Tile	1	157		17		
147	6	Tile	1	42		0		
151	7	Tile	1	158	91.98	24	13.11	19201
151	7	Tile	1	105		15		
151	7	Tile	1	104		11		
152	7	Tile	1	75		11		
152	7	Tile	1	69		17		
153	7	Tile	1	79		7		
153	7	Tile	1	86		13		
153	7	Tile	1	60		7		
154	8	Tile	1	0	44.35	0	6.21	11207
155	8	Tile	1	51		9		
155	8	Tile	1	37		3		
167	9	Tile	1	28	24.45	9	7.50	10066
167	9	Tile	1	23		6		
168	9	Tile	1	0		0		
169	9	Tile	1	23		7		
171	10	Tile	1	49	24.95	11	5.80	10645
171	10	Tile	1	3		2		
171	10	Tile	1	23		5		
201	11	Tile	1	10	11.73	5	5.14	12190
201	11	Tile	1	6		2		
201	11	Tile	1	0		0		
201	11	Tile	1	18		6		
202	11	Tile	1	13		7		
320	12	Tile	1	2	1.80	4	3.13	9911
320	12	Tile	1	2		2		
8	1	Surface	2	0	1.96	0	0.47	8925
26	2	Surface	2	2	1.96	0	0.47	2586
93	3	Surface	2	1	1.37	0	0.28	4965
108	4	Surface	2	0	1.37	0	0.28	1432
146	5	Surface	2	450	579.99	31	30.16	1807
146	5	Surface	2	598		39		
146	5	Surface	2	650		21		
146	5	Surface	2	622		30		

Appendix 8B. Surface and subsurface atrazine and de-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

- 3

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
151	6	Surface	2	221	171.99	18	14.28	18187
151	6	Surface	2	328		23		
151	6	Surface	2	65		7		
152	6	Surface	2	136		14		
153	6	Surface	2	110		9		
155	7	Surface	2	74	81.19	4	3.85	3213
155	7	Surface	2	101		5		
155	7	Surface	2	69		3		
167	8	Surface	2	55	55.14	13	12.08	1694
167	8	Surface	2	30		10		
167	8	Surface	2	39		13		
167	8	Surface	2	49		11		
167	8	Surface	2	42		13		
167	8	Surface	2	60		11		
167	8	Surface	2	112		15		
167	8	Surface	2	49		9		
167	8	Surface	2	62		14		
167	8	Surface	2	54		10		
168	8	Surface	2	0		0		
168	8	Surface	2	0		0		
169	8	Surface	2	68	34.32	0	1.12	8482
171	9	Surface	2	1		1		
171	9	Surface	2	0		0		
171	9	Surface	2	0	3.96	0	0.54	5282
201	10	Surface	2	4		1		
201	10	Surface	2	0	0.76	0	7.11	2622
320	11	Surface	2	0		7		
320	11	Surface	2	1		0	0.22	2259
8	1	Tile	2	1	0.76	0	0.30	1119
26	2	Tile	2	1	1.09	0	0.47	12936
87	3	Tile	2	1	0.67	0	0.42	17588
93	4	Tile	2	0	0.49	0	0.42	12064
108	5	Tile	2	0	0.49	0		
145	6	Tile	2	103	136.68	10	8.87	7011
145	6	Tile	2	126		11		
145	6	Tile	2	219		13		
146	6	Tile	2	177		14		
146	6	Tile	2	249		12		
146	6	Tile	2	81		2		
146	6	Tile	2	2		0		
147	6	Tile	2	144	69.65	13	5.40	8617
151	7	Tile	2					

Appendix 8B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
151	7	Tile	2	135		9		
151	7	Tile	2	72		9		
152	7	Tile	2	26		2		
152	7	Tile	2	47		5		
153	7	Tile	2	10		1		
153	7	Tile	2	110		4		
153	7	Tile	2	14		1		
154	8	Tile	2	0	40.30	4	5.14	5705
155	8	Tile	2	56		4		
155	8	Tile	2	25		6		
167	9	Tile	2	37	25.30	11	7.03	5959
167	9	Tile	2	14		4		
168	9	Tile	2	0		0		
169	9	Tile	2	25		6		
171	10	Tile	2	21	29.14	3	4.81	20892
171	10	Tile	2	40		7		
171	10	Tile	2	26		5		
201	11	Tile	2	7	8.69	3	2.90	11767
201	11	Tile	2	10		4		
201	11	Tile	2	0		0		
201	11	Tile	2	10		3		
202	11	Tile	2	7		3		
320	12	Tile	2	1	0.51	4	2.60	12154
320	12	Tile	2	0		2		

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
8	1	Surface	1	0.00	0.00	0.00	0.00	0.00
26	2	Surface	1	0.00	0.00	0.00	0.00	0.00
93	3	Surface	1	0.00	0.00	0.00	0.00	0.00
108	4	Surface	1	0.00	0.00	0.00	0.00	0.00
146	5	Surface	1	222.00	255.00	18.20	14.67	779.10
146	5	Surface	1	300.00		12.30		
146	5	Surface	1	243.00		13.50		
146	5	Surface	1	0.00		0.00		
151	6	Surface	1	155.05	123.94	11.74	10.42	10742.00
151	6	Surface	1	177.34		14.08		
151	6	Surface	1	79.20		7.50		
152	6	Surface	1	119.00		13.70		
153	6	Surface	1	89.10		5.07		
155	7	Surface	1	91.20	98.86	13.30	6.72	2185.30
155	7	Surface	1	76.35		2.33		
155	7	Surface	1	129.03		4.52		
167	8*	Surface	1	0.00	98.86	0.00	6.72	2508.50
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
167	8*	Surface	1	0.00		0.00		
168	8*	Surface	1	0.00		0.00		
168	8	Surface	1	0.00		0.00		
168	8*	Surface	1	0.00		0.00		
169	8	Surface	1	0.00		0.00		
171	9*	Surface	1	0.00	20.08	0.00	3.65	4415.80
171	9	Surface	1	27.93		4.26		
171	9*	Surface	1	0.00		0.00		
171	9	Surface	1	12.22		3.04		
201	10	Surface	1	0.00	38.07	0.00	5.70	4021.40
201	10	Surface	1	38.07		5.70		
320	11	Surface	1	0.00	38.07	0.00	5.70	1871.70
320	11	Surface	1	0.00		0.00		
8	1	Tile	1	2.11	2.11	0.72	0.72	5805.00
26	2	Tile	1	1.86	1.86	0.34	0.34	2094.00
87	3	Tile	1	2.10	2.10	1.06	1.06	18908.00
93	4	Tile	1	2.41	2.41	1.21	1.21	24420.00
108	5	Tile	1	0.00	2.41	0.00	1.21	28705.00

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
145	6	Tile	1	250.00	213.00	33.82	18.99	10896.00
145	6	Tile	1	148.31		11.50		
146	6	Tile	1	183.70		17.52		
146	6	Tile	1	168.00		12.20		
146	6	Tile	1	280.00		22.20		
146	6	Tile	1	248.00		18.70		
147	6	Tile	1	0.00		0.00		
151	7	Tile	1	59.20	111.68	3.49	12.39	25869.00
151	7	Tile	1	192.00		22.00		
151	7	Tile	1	112.00		14.10		
152	7	Tile	1	91.90		12.20		
152	7	Tile	1	78.00		14.80		
153	7	Tile	1	55.31		6.35		
153	7	Tile	1	182.51		13.84		
153	7	Tile	1	122.55		12.34		
154	8	Tile	1	0.00	103.98	7.77	5.75	11889.00
155	8	Tile	1	78.00		11.50		
155	8	Tile	1	129.98		0.00		
167	9	Tile	1	464.36	168.60	18.63	9.75	23058.00
167	9	Tile	1	18.40		5.59		
168	9	Tile	1	0.00		0.00		
169	9	Tile	1	23.03		5.03		
171	10	Tile	1	56.87	46.06	16.30	13.48	35810.00
171	10	Tile	1	50.41		14.52		
171	10	Tile	1	30.90		9.63		
201	11	Tile	1	21.81	25.94	8.21	5.64	17984.00
201	11	Tile	1	13.74		5.15		
201	11	Tile	1	10.63		0.00		
201	11	Tile	1	57.58		9.18		
202	11	Tile	1	0.00		0.43		
320	12	Tile	1	0.00	25.94	0.00	5.84	555.00
320	12	Tile	1	0.00		0.00		
8	1	Surface	2	1.63	1.63	0.76	0.76	37951.10
26	2	Surface	2	0.00	0.00	0.00	0.00	0.00
93	3	Surface	2	0.50	0.50	2.23	2.23	6607.50
108	4	Surface	2	0.00	0.50	0.00	2.23	911.60
146	5	Surface	2	232.00	342.43	16.80	19.55	4625.90
146	5	Surface	2	410.00		27.80		
146	5	Surface	2	307.00		15.00		
146	5	Surface	2	420.73		18.60		

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

- 3

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
151	6	Surface	2	189.90	145.49	11.74	11.62	15920.70
151	6	Surface	2	197.04		14.08		
151	6	Surface	2	86.50		9.50		
152	6	Surface	2	138.00		13.30		
153	6	Surface	2	116.00		9.47		
155	7	Surface	2	67.67	89.97	8.49	4.89	3646.40
155	7	Surface	2	81.28		2.33		
155	7	Surface	2	120.97		3.85		
167	8*	Surface	2	83.33	53.21	14.15	13.09	2508.50
167	8*	Surface	2	49.49		21.30		
167	8*	Surface	2	77.08		16.04		
167	8*	Surface	2	58.33		13.21		
167	8*	Surface	2	42.71		9.43		
167	8*	Surface	2	34.32		17.94		
167	8*	Surface	2	53.65		11.79		
168	8*	Surface	2	36.98		5.66		
168	8	Surface	2	43.03		8.30		
168	8*	Surface	2	0.00		0.00		
169	8	Surface	2	0.00		0.00		
171	9*	Surface	2	79.92	89.59	49.33	34.05	4415.80
171	9*	Surface	2	16.94		5.15		
171	9*	Surface	2	171.92		47.68		
171	9	Surface	2	0.00		0.00		
201	10	Surface	2	21.39	21.39	2.37	2.37	4021.40
201	10	Surface	2					
320	11	Surface	2	21.39	21.39	2.37	2.37	1871.70
320	11	Surface	2			0.00		
8	1	Tile	2	1.45	1.45	0.35	0.35	3369.00
26	2	Tile	2	2.05	2.05	0.46	0.46	1765.00
87	3	Tile	2	1.37	1.37	0.45	0.45	7961.00
93	4	Tile	2	1.55	1.55	0.75	0.75	19885.00
108	5	Tile	2	0.00	1.55	0.00	0.75	10950.00
145	6	Tile	2	0.00	122.69	0.47	7.14	5246.00
145	6	Tile	2	83.90		7.80		
146	6	Tile	2	56.17		5.05		
146	6	Tile	2	87.40		8.37		
146	6	Tile	2	207.00		11.60		
146	6	Tile	2	179.00		9.52		
147	6	Tile	2	0.00		0.00		
151	7	Tile	2	29.60	110.36	1.94	10.30	11471.00

Appendix 9B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
151	7	Tile	2	82.00		9.32		
151	7	Tile	2	113.00		11.20		
152	7	Tile	2	164.00		15.70		
152	7	Tile	2	78.00		13.30		
153	7	Tile	2	105.62		8.51		
153	7	Tile	2	171.10		9.27		
153	7	Tile	2	139.57		13.19		
154	8	Tile	2	0.00	62.05	0.00	9.93	6650.00
155	8	Tile	2	54.10		7.53		
155	8	Tile	2	70.00		12.32		
167	9	Tile	2	427.70	186.51	13.46	12.34	8712.00
167	9	Tile	2	50.00		9.41		
168	9	Tile	2	81.82		0.00		
169	9	Tile	2	0.00		14.14		
171	10	Tile	2	51.77	51.17	10.76	9.92	10952.00
171	10	Tile	2	74.74		12.49		
171	10	Tile	2	27.00		6.51		
201	11	Tile	2	15.40	18.63	4.18	5.15	14075.00
201	11	Tile	2	21.01		5.98		
201	11	Tile	2	0.00		0.00		
201	11	Tile	2	20.45		5.31		
202	11	Tile	2	17.64		5.14		
320	12	Tile	2	3.93	3.93	0.00	4.12	2313.00
320	12	Tile	2	0.00		0.00		

Appendix 10B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for zero tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
8	1	Surface	1	43446.60	11774.03	13429.34	12.33
26	2	Surface	1	0.00	0.00	0.00	
93	3	Surface	1	4419.00	76.01	99.87	23.89
108	4	Surface	1	0.00	0.00	0.00	
146	5	Surface	1	1839.40	8403.42	8938.07	5.98
151	6	Surface	1	12135.30	29791.68	32051.51	7.05
155	7	Surface	1	2240.20	3501.98	3678.33	4.80
168	8	Surface	1	2405.10	3759.73	3949.09	4.80
171	9	Surface	1	3539.70	1397.47	1604.02	12.88
201	10	Surface	1	4842.50	452.29	529.77	14.63
320	11	Surface	1	4790.80	71.86	378.32	80.90
8	1	Tile	1	3987.00	79.34	99.68	20.40
26	2	Tile	1	1430.00	34.75	47.62	27.03
87	3	Tile	1	15214.00	254.07	427.51	40.57
93	4	Tile	1	17203.00	395.67	528.13	25.08
108	5	Tile	1	17197.00	395.53	527.95	25.08
145	6	Tile	1	15100.00	33418.06	35604.79	6.14
151	7	Tile	1	20421.00	18924.65	20722.47	8.68
154	8	Tile	1	14564.00	11469.15	12590.58	8.91
167	9	Tile	1	10389.00	3249.68	3919.08	17.08
171	10	Tile	1	6446.00	2628.03	3207.10	18.06
201	11	Tile	1	12157.00	1147.92	1541.20	25.52
320	12	Tile	1	12165.00	211.67	560.81	62.26
8	1	Surface	2	57702.50	1863.79	2094.60	11.02
26	2	Surface	2	2886.70	92.09	113.74	19.04
93	3	Surface	2	4709.90	42.39	56.52	25.00
108	4	Surface	2	1548.40	13.94	18.58	25.00
146	5	Surface	2	1852.30	10192.84	10789.65	5.53
151	6	Surface	2	12494.10	32140.07	34400.01	6.57
155	7	Surface	2	2637.80	3429.84	3685.80	6.94
168	8	Surface	2	2405.10	3127.27	3360.65	6.94
171	9	Surface	2	3539.70	4602.55	4946.02	6.94
201	10	Surface	2	4842.50	659.79	799.98	17.52
320	11	Surface	2	4005.20	47.06	227.90	79.35
8	1	Tile	2	2030.00	31.06	37.15	16.39
26	2	Tile	2	650.00	2.47	4.29	42.42
87	3	Tile	2	13065.00	134.57	256.07	47.45
93	4	Tile	2	16996.00	185.26	345.02	46.31
108	5	Tile	2	24588.00	268.01	499.14	46.31
145	6	Tile	2	9816.00	21505.87	23106.70	6.93
151	7	Tile	2	13274.00	13092.64	14317.00	8.55

Appendix 10B. Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
154	8	Tile	2	5073.00	2499.21	2842.40	12.07
167	9	Tile	2	4273.00	1364.94	1759.05	22.40
171	10	Tile	2	13297.00	4928.31	6044.82	18.47
201	11	Tile	2	14816.00	1460.12	2002.38	27.08
320	12	Tile	2	4390.00	61.90	251.33	75.37

Appendix 11B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
8	1	Surface	1	3168	77.93	113.73	68.52
26	2	Surface	1	1196	29.42	42.94	68.52
93	3	Surface	1	4965	111.72	141.01	79.23
108	4	Surface	1	1083	24.58	31.03	79.23
146	5	Surface	1	4177	23104.74	24577.31	94.01
151	6	Surface	1	15672	41219.97	45367.35	90.86
155	7	Surface	1	2389	3063.05	3398.21	90.14
167	8	Surface	1	1694	2171.92	2409.57	90.14
171	9	Surface	1	8482	787.23	892.09	86.00
201	10	Surface	1	5282	520.29	615.36	84.55
320	11	Surface	1	4529	74.50	321.33	23.19
8	1	Tile	1	4867	132.38	172.78	76.62
26	2	Tile	1	2999	98.67	135.85	72.63
87	3	Tile	1	15852	158.52	332.89	47.62
93	4	Tile	1	20744	95.42	217.81	43.81
108	5	Tile	1	17585	80.89	184.64	43.81
145	6	Tile	1	11978	18692.70	20561.66	90.91
151	7	Tile	1	19201	17661.32	20179.29	87.52
154	8	Tile	1	11207	4970.30	5665.70	87.73
167	9	Tile	1	10066	2461.47	3216.09	76.54
171	10	Tile	1	10645	2655.93	3272.98	81.15
201	11	Tile	1	12190	1429.58	2056.45	69.52
320	12	Tile	1	9911	177.90	488.12	36.45
8	1	Surface	2	8925	174.94	216.88	80.66
26	2	Surface	2	2586	50.69	62.84	80.66
93	3	Surface	2	4965	68.02	81.93	83.03
108	4	Surface	2	1432	19.62	23.63	83.03
146	5	Surface	2	1807	10480.37	11025.32	95.06
151	6	Surface	2	18187	31279.11	33876.92	92.33
155	7	Surface	2	3213	2608.69	2732.40	95.47
167	8	Surface	2	1694	934.02	1138.64	82.03
171	9	Surface	2	8482	2911.16	3006.16	96.84
201	10	Surface	2	5282	209.17	237.69	88.00
320	11	Surface	2	2622	19.92	206.33	9.66
8	1	Tile	2	2259	17.17	22.14	77.55
26	2	Tile	2	1119	12.20	15.55	78.42
87	3	Tile	2	12936	86.67	147.47	58.77
93	4	Tile	2	17588	86.18	160.05	53.85
108	5	Tile	2	12064	59.11	109.78	53.85
145	6	Tile	2	7011	9582.84	10204.91	93.90
151	7	Tile	2	8617	6001.42	6466.84	92.80

Appendix 11B. Surface and subsurface transport of atrazine and percent metabolite for each event for ridge tillage, 1989

- 2

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
154	8	Tile	2	5705	2299.12	2592.35	88.69
167	9	Tile	2	5959	1507.83	1926.94	78.25
171	10	Tile	2	20692	6087.23	7091.44	85.84
201	11	Tile	2	11767	1022.85	1364.38	74.97
320	12	Tile	2	12154	61.38	377.38	16.26

Appendix 12B. Surface and subsurface transport of atrazine and percent metabolite for each event for conventional, 1989

- 1

Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
8	1	Surface	1	0.00	0.00	0.00	
26	2	Surface	1	0.00	0.00	0.00	
93	3	Surface	1	0.00	0.00	0.00	
108	4	Surface	1	0.00	0.00	0.00	
146	5	Surface	1	779.10	1986.71	2100.97	5.44
151	6	Surface	1	10742.00	13313.42	14432.52	7.75
155	7	Surface	1	2185.30	2160.39	2307.17	6.36
167	8	Surface	1	2508.50	2479.90	2648.39	6.36
171	9	Surface	1	4415.80	886.47	1047.65	15.38
201	10	Surface	1	4021.40	1530.95	1760.17	13.02
320	11	Surface	1	1871.70	712.56	819.24	13.02
8	1	Tile	1	5805.00	122.49	164.28	25.44
26	2	Tile	1	2094.00	38.95	46.07	15.45
87	3	Tile	1	18908.00	397.07	597.49	33.54
93	4	Tile	1	24420.00	588.52	884.00	33.43
108	5	Tile	1	28705.00	691.79	1039.12	33.43
145	6	Tile	1	10896.00	23208.66	25277.81	8.19
151	7	Tile	1	25869.00	28891.47	32096.64	9.99
154	8	Tile	1	11889.00	12362.18	13045.80	5.24
167	9	Tile	1	23058.00	38875.02	41123.17	5.47
171	10	Tile	1	35810.00	16494.09	21322.47	22.64
201	11	Tile	1	17984.00	4665.05	5678.45	17.85
320	12	Tile	1	555.00	143.97	175.24	17.85
8	1	Surface	2	37951.10	618.60	907.03	31.80
26	2	Surface	2	0.00	0.00	0.00	
93	3	Surface	2	6607.50	33.04	180.38	81.68
108	4	Surface	2	911.60	4.56	24.89	81.68
146	5	Surface	2	4625.90	15840.59	16744.95	5.40
151	6	Surface	2	15920.70	23162.71	25012.37	7.40
155	7	Surface	2	3646.40	3280.79	3459.10	5.15
167	8	Surface	2	2508.50	1334.86	1663.25	19.74
171	9	Surface	2	4415.80	3956.26	5459.99	27.54
201	10	Surface	2	4021.40	860.18	955.49	10.00
320	11	Surface	2	1871.70	400.36	444.72	10.00
8	1	Tile	2	3369.00	48.85	60.64	19.44
26	2	Tile	2	1765.00	36.18	44.30	18.33
87	3	Tile	2	7961.00	109.07	144.89	24.73
93	4	Tile	2	19885.00	308.22	457.36	32.61
108	5	Tile	2	10950.00	169.73	251.85	32.61
145	6	Tile	2	5246.00	6436.53	6810.83	5.50
151	7	Tile	2	11471.00	12659.54	13841.48	8.54

Appendix 12B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for conventional tillage, 1989

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Julian Time/89	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
154	8	Tile	2	6650.00	4126.33	4786.34	13.79
167	9	Tile	2	8712.00	16248.46	17323.23	6.20
171	10	Tile	2	10962.00	5604.14	6690.58	16.24
201	11	Tile	2	14075.00	2621.47	3346.68	21.67
320	12	Tile	2	2313.00	90.90	186.24	51.19

Appendix 13B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990 - 1

Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
4	1	Surface	1	1.81	2.24	9.50	5.07	8269.07
4	1	Surface	1	2.66		0.63		
10	2	Surface	1	1.97	1.97	0.92	0.92	10059.94
18	3	Surface	1	0.00	0.00	0.00	0.00	0.00
38	4	Surface	1	0.00	0.00	0.00	0.00	0.00
39	5	Surface	1	2.15	2.15	3.68	3.68	8585.87
39	5	Surface	1	2.15		3.68		
39	5	Surface	1	2.15		3.68		
53	6	Surface	1	2.15	1.20	3.68	3.68	17113.54
53	6	Surface	1	1.20		3.68		
58	7	Surface	1	0.00	0.00	0.00	0.00	0.00
101	8	Surface	1	2.20	2.20	0.72	0.72	4040.79
134	9	Surface	1	2.15	2.15	3.68	3.68	4583.87
136	10	Surface	1	2.15	2.15	3.68	3.68	5521.33
137	10	Surface	1	2.15		3.68		
137	11	Surface	1	2.15	2.15	3.68	3.68	3022.51
159	12	Surface	1	0.00	0.00	0.00	0.00	0.00
159	12	Surface	1	0.00		0.00		
195	13	Surface	1	0.00	0.00	0.00	0.00	0.00
225	14	Surface	1	0.00	0.00	0.00	0.00	0.00
231	15	Surface	1	0.00	0.00	0.00	0.00	0.00
250	16	Surface	1	11.62	13.72	2.77	3.05	6940.46
250	16	Surface	1	15.82		3.33		
250	17	Surface	1	19.28	19.28	3.94	3.94	7131.18
250	17	Surface	1	0.00		0.00		
258	18	Surface	1	6.47	8.89	2.00	2.66	7574.05
258	18	Surface	1	11.82		3.02		
258	18	Surface	1	8.39		2.97		
259	19	Surface	1	9.95	9.95	2.33	2.33	5964.20
262	20	Surface	1	5.09	6.92	2.53	2.15	5531.03
262	20	Surface	1	7.64		1.79		
262	20	Surface	1	8.04		2.13		
265	21	Surface	1	0.00	9.64	0.00	2.96	2641.06
265	21	Surface	1	9.64		2.96		
4	1	Tile	1	0.00	0.00	0.00	0.00	0.00
10	1	Tile	1	0.00		0.79		
12	2	Tile	1	0.85	0.85	0.79	0.79	166.00
18	3	Tile	1	0.87	0.76	1.08	1.08	12822.00
18	3	Tile	1	0.64		0.88		
24	4	Tile	1	0.85	0.85	0.79	0.79	6783.00

Appendix 13B.

- 2

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event
concentrations and water volumes for zero tillage, 1990

Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
32	5	Tile	1	0.85	0.85	0.79	0.79	8745.00
38	6	Tile	1	0.00	0.70	0.79	0.79	11849.00
38	6	Tile	1	0.70		0.79		
39	6	Tile	1	0.00		0.79		
39	6	Tile	1	0.00		0.79		
40	6	Tile	1	0.00		0.79		
45	7	Tile	1	0.85	0.85	0.79	0.79	2468.00
53	8	Tile	1	0.85	0.85	0.79	0.79	27825.00
53	8	Tile	1	0.85		0.79		
70	9	Tile	1	0.89	0.89	0.56	0.56	18227.00
71	9	Tile	1	0.50		0.66		
92	10	Tile	1	0.85	0.85	0.79	0.79	5811.00
101	11	Tile	1	0.85	0.85	0.79	0.79	16813.00
101	11	Tile	1	0.85		0.79		
111	12	Tile	1	0.85	0.85	0.79	0.79	4821.00
125	13	Tile	1	0.85	0.85	0.79	0.79	8919.00
134	14	Tile	1	0.85	0.85	0.79	0.79	12876.00
135	14	Tile	1	0.85		0.79		
136	15	Tile	1	0.85	1.67	0.79	1.19	15848.00
137	15	Tile	1	0.85		0.79		
137	15	Tile	1	1.67		1.19		
159	16	Tile	1	234.09	219.09	23.18	19.36	6302.00
159	16	Tile	1	256.78		21.25		
159	16	Tile	1	166.39		13.64		
179	16	Tile	1	0.00		0.00		
195	17	Tile	1	25.00	20.79	12.96	9.46	1386.00
195	17	Tile	1	25.69		10.01		
196	17	Tile	1	11.67		5.42		
225	18	Tile	1	0.00	0.00	0.00	0.00	0.00
225	19	Tile	1	3.04	3.04	1.63	1.63	547.00
231	20	Tile	1	3.96	3.96	2.92	2.92	3231.00
250	21	Tile	1	0.00	9.70	0.00	4.83	17853.00
250	21	Tile	1	11.90		5.09		
250	21	Tile	1	14.81		4.88		
250	21	Tile	1	13.76		4.81		
250	21	Tile	1	11.79		5.32		
251	21	Tile	1	5.95		4.04		
258	22	Tile	1	9.12	8.61	4.67	4.07	8800.00
258	22	Tile	1	9.29		3.83		
258	22	Tile	1	6.00		2.86		

Appendix 13B.

Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
258	22	Tile	1	10.03		4.94		
259	23	Tile	1	6.58	6.58	3.27	3.27	6695.00
262	24	Tile	1	6.83	6.77	3.29	3.20	5509.00
262	24	Tile	1	7.47		4.07		
262	24	Tile	1	6.19		2.55		
263	24	Tile	1	7.12		3.12		
263	24	Tile	1	6.23		2.98		
265	25	Tile	1	5.88	5.88	3.03	3.03	2643.00
4	1	Surface	2	1.71	0.93	4.31	2.45	14210.64
4	1	Surface	2	0.15		0.59		
10	2	Surface	2	3.46	3.46	1.22	1.22	5931.88
18	3	Surface	2	2.32	2.32	0.70	0.70	2489.13
38	4	Surface	2	1.91	1.91	1.70	1.70	3125.95
39	5	Surface	2	1.91	1.91	1.70	1.70	3203.54
39	5	Surface	2	1.91		1.70		
39	5	Surface	2	1.91		1.70		
53	6	Surface	2	1.91	1.02	1.70	0.43	17912.00
53	6	Surface	2	1.02		0.43		
58	7	Surface	2	0.00	0.00	0.00	0.00	0.00
101	8	Surface	2	2.80	2.80	0.86	0.86	2938.46
134	9	Surface	2	1.91	1.91	1.70	1.70	3423.36
136	10	Surface	2	1.91	1.91	1.70	1.70	4273.54
137	10	Surface	2	1.91		1.70		
137	11	Surface	2	1.91	1.91	1.70	1.70	1703.60
159	12	Surface	2	654.55	762.62	42.93	56.62	1322.15
159	12	Surface	2	870.69		70.31		
195	13	Surface	2	0.00	0.00	0.00	0.00	0.00
225	14	Surface	2	0.00	0.00	0.00	0.00	0.00
231	15	Surface	2	0.38	0.38	0.51	0.51	4188.26
250	16	Surface	2	14.03	14.34	3.39	3.03	5863.99
250	16	Surface	2	14.65		2.66		
250	17	Surface	2	20.11	21.04	5.67	5.50	5906.02
250	17	Surface	2	21.97		5.32		
258	18	Surface	2	11.53	11.81	3.22	2.89	5841.38
258	18	Surface	2	11.57		2.33		
258	18	Surface	2	12.34		3.13		
259	19	Surface	2	9.78	9.78	2.11	2.11	6791.76
262	20	Surface	2	6.51	6.45	1.72	2.26	7609.61
262	20	Surface	2	10.73		3.10		
262	20	Surface	2	8.12		1.95		

Appendix 13B.

Surface and subsurface atrazine and de-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume L/plot
265	21	Surface	2	9.45	9.68	3.54	2.94	2673.39
265	21	Surface	2	9.91		2.34		
4	1	Tile	2	0.00	0.00	0.00	0.00	0.00
10	2	Tile	2	0.56	0.56	0.70	0.70	2126.00
12	2	Tile	2	0.99		1.16		
18	3	Tile	2	2.74	1.85	3.41	3.41	13559.00
18	3	Tile	2	0.98		1.52		
24	4	Tile	2	0.99	0.99	1.16	1.16	6043.00
32	5	Tile	2	0.99	0.99	1.16	1.16	7237.00
38	6	Tile	2	0.99	0.99	1.16	1.06	11115.00
38	6	Tile	2	0.99		1.06		
39	6	Tile	2	0.99		1.16		
39	6	Tile	2	0.99		1.16		
40	6	Tile	2	0.99		1.16		
45	7	Tile	2	0.99	0.99	1.16	1.16	5222.00
53	8	Tile	2	0.99	0.99	1.16	1.16	15878.00
53	8	Tile	2	0.99		1.16		
70	9	Tile	2	0.99	0.99	0.56	0.61	25729.00
71	9	Tile	2	0.99		0.66		
92	10	Tile	2	0.99	0.99	1.16	1.16	5744.00
101	11	Tile	2	0.99	0.99	1.16	1.16	12052.00
101	11	Tile	2	0.99		1.16		
111	12	Tile	2	0.99	0.99	1.16	1.16	5268.00
125	13	Tile	2	0.99	0.99	1.16	1.16	8718.00
134	14	Tile	2	0.99	0.99	1.16	1.16	8237.00
135	14	Tile	2	0.99		1.16		
136	15	Tile	2	0.99	0.99	1.16	1.16	11331.00
137	15	Tile	2	0.99		1.16		
137	15	Tile	2	0.99		1.16		
159	16	Tile	2	345.59	347.99	28.02	24.44	14459.00
159	16	Tile	2	386.49		34.59		
159	16	Tile	2	311.90		29.72		
179	16	Tile	2	25.42		5.41		
195	17	Tile	2	9.93	23.24	4.04	8.69	4853.00
195	17	Tile	2	28.68		10.64		
196	17	Tile	2	31.11		11.40		
225	18	Tile	2	3.13	3.13	1.63	1.63	135.00
225	19	Tile	2	3.13	3.13	1.63	1.63	1770.00
231	20	Tile	2	4.36	4.36	3.21	3.21	2531.00
250	21	Tile	2	0.00	19.80	0.00	6.90	20840.00

Appendix 13B.

Surface and subsurface atrazine and de-ethyl atrazine concentrations, event concentrations and water volumes for zero tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
250	21	Tile	2	21.77		6.11		
250	21	Tile	2	14.82		4.49		
250	21	Tile	2	23.95		8.70		
250	21	Tile	2	22.62		8.40		
251	21	Tile	2	15.85		6.78		
258	22	Tile	2	9.62	10.19	4.78	4.83	4674.00
258	22	Tile	2	14.43		5.47		
258	22	Tile	2	7.01		4.71		
258	22	Tile	2	9.72		4.35		
259	23	Tile	2	9.29	9.29	4.07	4.07	2936.00
262	24	Tile	2	5.97	7.43	3.29	3.36	2975.00
262	24	Tile	2	10.24		3.18		
262	24	Tile	2	4.92		3.03		
263	24	Tile	2	8.60		3.94		
263	24	Tile	2	0.00		0.00		
265	25	Tile	2	13.73	13.73	6.31	6.31	1462.00

Appendix 14B. Surface and subsurface atrazine and de-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990 - 1

Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
4	1	Surface	1	1.28	1.21	9.19	5.10	11740.91
4	1	Surface	1	1.13		1.01		
10	2	Surface	1	1.49	1.49	0.25	0.25	6074.11
18	3	Surface	1	1.30	1.30	3.48	3.48	0.00
38	4	Surface	1	1.30	1.30	3.48	3.48	0.00
39	5	Surface	1	1.30	1.30	3.48	3.48	9245.32
39	5	Surface	1	1.30		3.48		
39	5	Surface	1	1.30		3.48		
53	6	Surface	1	1.30	1.40	3.48	0.86	18348.41
53	6	Surface	1	1.40		0.86		
58	7	Surface	1	1.30	1.30	3.48	3.48	0.00
101	8	Surface	1	1.30	1.30	1.67	1.67	3959.97
134	9	Surface	1	1.30	1.30	3.48	3.48	4855.41
136	10	Surface	1	1.30	1.30	3.48	3.48	6727.10
137	10	Surface	1	1.30		3.48		
137	11	Surface	1	1.30	1.30	3.48	3.48	3769.25
159	12	Surface	1		0.00		0.00	0.00
159	12	Surface	1					
195	13	Surface	1		0.00		0.00	0.00
225	14	Surface	1		0.00		0.00	0.00
231	15	Surface	1	0.29	0.29	0.05	0.05	4289.70
250	16	Surface	1	6.82	6.61	2.22	1.77	7590.22
250	16	Surface	1	6.40		1.33		
250	17	Surface	1	15.62	13.50	3.78	3.49	9720.52
250	17	Surface	1	11.39		3.19		
258	18	Surface	1	7.71	10.74	2.67	3.05	6238.98
258	18	Surface	1	11.94		3.12		
258	18	Surface	1	12.58		3.36		
259	19	Surface	1	8.62	8.62	2.44	2.44	6293.93
262	20	Surface	1	4.67	5.87	1.38	2.10	6468.49
262	20	Surface	1	7.82		3.08		
262	20	Surface	1	5.11		1.84		
265	21	Surface	1	16.36	13.50	7.69	5.73	1241.33
265	21	Surface	1	10.64		3.77		
4	1	Tile	1	1.34	1.49	2.09	1.78	624.00
10	2	Tile	1	1.64	1.64	1.46	1.46	4957.00
12	2	Tile	1	1.34		2.09		
18	3	Tile	1	1.18	1.20	1.63	2.40	13052.00
18	3	Tile	1	1.21		3.17		
24	4	Tile	1	1.34	1.34	2.09	2.09	5404.00

Appendix 14B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990 - 2

Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
32	5	Tile	1	1.34	1.34	2.09	2.09	5532.00
38	6	Tile	1	1.34	1.34	2.09	0.51	11738.00
38	6	Tile	1	1.34		0.51		
39	6	Tile	1	1.34		2.09		
39	6	Tile	1	1.34		2.09		
40	6	Tile	1	1.34		2.09		
46	7	Tile	1	1.34	1.34	2.09	2.09	1255.00
53	8	Tile	1	1.34	1.34	2.09	2.09	26871.00
53	8	Tile	1	1.34		2.09		
71	9	Tile	1	1.34	1.34	2.09	2.09	20169.00
92	10	Tile	1	1.34	1.34	2.09	2.09	5723.00
101	11	Tile	1	1.34	1.34	2.09	2.09	13866.00
101	11	Tile	1	1.34		2.09		
111	12	Tile	1	1.34	1.34	2.09	2.09	4209.00
125	13	Tile	1	1.34	1.34	2.09	2.09	7829.00
134	14	Tile	1	1.34	1.34	2.09	2.09	9866.00
135	14	Tile	1	1.34		2.09		
136	15	Tile	1	1.34	1.36	2.09	1.16	14257.00
137	15	Tile	1	1.34		2.09		
137	15	Tile	1	1.36		1.16		
159	16	Tile	1	293.48	251.33	30.00	23.00	7135.00
159	16	Tile	1	276.19		21.70		
159	16	Tile	1	184.32		17.31		
179	16	Tile	1					
195	17	Tile	1	8.55	11.41	4.42	5.54	902.00
195	17	Tile	1	12.80		5.78		
196	17	Tile	1	12.89		6.43		
225	18	Tile	1		0.00	1.74	1.74	0.00
225	19	Tile	1	2.95	2.95	1.74	1.74	990.00
231	20	Tile	1	1.91	1.91	1.41	1.41	2472.00
250	21	Tile	1		12.21		6.54	16113.00
250	21	Tile	1	13.18		6.50		
250	21	Tile	1	13.97		7.10		
250	21	Tile	1	13.60		6.91		
250	21	Tile	1	10.82		6.68		
251	21	Tile	1	9.48		5.53		
258	22	Tile	1	7.55	8.92	5.78	5.83	8152.00
258	22	Tile	1	7.96		5.03		
258	22	Tile	1	11.02		6.37		
258	22	Tile	1	9.17		6.12		

Appendix 14B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
259	23	Tile	1	6.50	6.50	4.29	4.29	5274.00
262	24	Tile	1	5.97	6.27	3.65	3.85	4834.00
262	24	Tile	1	7.75		4.27		
262	24	Tile	1	6.78		4.13		
263	24	Tile	1	5.47		3.51		
263	24	Tile	1	5.39		3.67		
265	25	Tile	1	6.78	6.78	4.25	4.25	2084.00
4	1	Surface	2	0.44	0.35	9.71	5.13	15733.21
4	1	Surface	2	0.25		0.55		
10	2	Surface	2	0.40	0.40	0.08	0.08	6491.12
18	3	Surface	2	1.07	1.07	0.61	0.61	2941.69
38	4	Surface	2	0.54	0.54	2.74	2.74	4021.39
39	5	Surface	2	0.54	0.54	2.74	2.74	3620.55
39	5	Surface	2	0.54		2.74		
39	5	Surface	2	0.54		2.74		
53	6	Surface	2	0.54	0.50	2.74	0.14	19466.90
53	6	Surface	2	0.50		0.14		
58	7	Surface	2		0.00		0.00	0.00
101	8	Surface	2	1.66	1.66	0.29	0.29	5343.54
134	9	Surface	2	0.54	0.54	2.74	2.74	6533.15
136	10	Surface	2	0.54	0.54	2.74	2.74	6109.67
137	10	Surface	2	0.54		2.74		
137	11	Surface	2	0.54	0.54	2.74	2.74	4144.23
159	12	Surface	2	487.50	576.38	38.27	41.74	2828.55
159	12	Surface	2	665.25		45.21		
195	13	Surface	2	83.08	83.08	14.61	14.61	1305.98
225	14	Surface	2	14.31	14.31	1.93	1.93	1900.79
231	15	Surface	2	0.15	0.15	0.20	0.20	5094.62
250	16	Surface	2	11.90	13.91	2.26	2.30	5398.49
250	16	Surface	2	15.91		2.33		
250	17	Surface	2	12.30	20.53	2.65	3.45	6061.18
250	17	Surface	2	28.78		4.26		
258	18	Surface	2	8.48	11.14	2.00	2.58	8126.83
258	18	Surface	2	13.68		3.67		
258	18	Surface	2	11.27		2.09		
259	19	Surface	2	8.19	8.19	1.73	1.73	6345.65
262	20	Surface	2	5.68	5.96	1.10	1.30	8967.32
262	20	Surface	2	4.91		1.41		
262	20	Surface	2	7.29		1.38		
265	21	Surface	2	9.45	10.55	2.36	2.88	2683.08

Appendix 14B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
265	21	Surface	2	11.64		3.39		
4	1	Tile	2	0.83	0.83	0.51	0.51	0.00
10	2	Tile	2	0.42	0.63	0.15	0.33	3381.00
12	2	Tile	2	0.83		0.51		
18	3	Tile	2	0.89	0.81	0.20	0.47	13714.00
18	3	Tile	2	0.72		0.74		
24	4	Tile	2	0.83	0.83	0.51	0.51	5813.00
32	5	Tile	2	0.83	0.83	0.51	0.51	7033.00
38	6	Tile	2	0.83	0.54	0.51	0.32	13331.00
38	6	Tile	2	0.54		0.32		
39	6	Tile	2	0.83		0.51		
39	6	Tile	2	0.83		0.51		
40	6	Tile	2	0.83		0.51		
46	7	Tile	2	0.83	0.83	0.51	0.51	3303.00
53	8	Tile	2	0.83	0.83	0.51	0.51	20929.00
53	8	Tile	2	0.83		0.51		
71	9	Tile	2	0.83	0.83	0.51	0.51	26822.00
92	10	Tile	2	0.83	0.83	0.51	0.51	5936.00
101	11	Tile	2	0.83	0.83	0.51	0.51	10529.00
101	11	Tile	2	0.83		0.51		
111	12	Tile	2	0.83	0.83	0.51	0.51	5061.00
125	13	Tile	2	0.83	0.83	0.51	0.51	7163.00
134	14	Tile	2	0.83	0.83	0.51	0.51	5144.00
135	14	Tile	2	0.83		0.51		
136	15	Tile	2	0.83	0.65	0.51	0.46	8562.00
137	15	Tile	2	0.83		0.51		
137	15	Tile	2	0.65		0.46		
159	16	Tile	2	381.97	321.98	31.98	19.22	15285.00
159	16	Tile	2	340.54		22.96		
159	16	Tile	2	243.44		17.31		
179	16	Tile	2	22.71		4.64		
195	17	Tile	2	2.51	14.95	1.47	4.84	6879.00
195	17	Tile	2	19.56		6.05		
196	17	Tile	2	22.78		7.00		
225	18	Tile	2		0.00	1.11	1.11	0.00
225	19	Tile	2	2.40	2.40	1.11	1.11	881.00
231	20	Tile	2	1.96	1.96	1.25	1.25	2874.00
250	21	Tile	2		14.40		4.56	14125.00
250	21	Tile	2	13.27		4.62		
250	21	Tile	2	11.36		3.33		

Appendix 14B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for ridge tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
250	21	Tile	2	11.23		4.84		
250	21	Tile	2	23.26		4.68		
251	21	Tile	2	12.89		5.36		
258	22	Tile	2	6.63	11.56	3.22	4.54	4041.00
258	22	Tile	2	10.28		3.72		
258	22	Tile	2	14.45		5.22		
258	22	Tile	2	14.88		6.00		
259	23	Tile	2	5.67	5.67	2.42	2.42	3265.00
262	24	Tile	2	6.66	7.49	2.24	2.44	3002.00
262	24	Tile	2	8.30		2.54		
262	24	Tile	2	8.47		2.79		
263	24	Tile	2	6.51		2.18		
263	24	Tile	2					
265	25	Tile	2	6.27	6.27	2.67	2.67	1236.00

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
4.38	1	Surface	1	0.17	0.41	5.05	3.32	13767.77
4.46	1	Surface	1	0.65		1.58		
10.42	2	Surface	1	0.00	0.00	0.00	0.00	0.00
18.06	3	Surface	1	0.00	0.00	0.00	0.00	0.00
37.65	4	Surface	1	0.00	0.00	0.00	0.00	0.00
38.55	5	Surface	1	0.00	0.00	0.00	0.00	0.00
38.56	5	Surface	1	0.00		0.00		
38.60	5	Surface	1	0.00		0.00		
53.21	6	Surface	1	0.41	0.41	3.31	3.31	22783.58
53.42	6	Surface	1	0.41		3.31		
58.00	7	Surface	1	0.41	0.41	3.31	3.31	5262.72
100.67	8	Surface	1	0.00	0.00	0.00	0.00	0.00
133.63	9	Surface	1	0.00	0.00	0.00	0.00	0.00
136.35	10	Surface	1	0.00	0.00	0.00	0.00	0.00
136.63	10	Surface	1	0.00		0.00		
137.47	11	Surface	1	0.00	0.00	0.00	0.00	0.00
159.29	12	Surface	1	349.18	349.18	37.50	37.50	2224.05
159.32	12	Surface	1	0.00		0.00		
195.45	13	Surface	1	0.00	0.00	0.00	0.00	0.00
225.29	14	Surface	1	0.00	0.00	0.00	0.00	0.00
231.38	15	Surface	1	0.00	0.00	0.00	0.00	0.00
249.95	16	Surface	1	32.65	36.91	12.90	13.77	5104.32
249.99	16	Surface	1	41.16		14.63		
250.03	17	Surface	1	51.42	51.42	16.18	16.18	6116.14
250.45	17	Surface	1	0.00		0.00		
257.67	18	Surface	1	13.73	23.03	6.03	7.54	4677.62
257.73	18	Surface	1	26.37		7.53		
257.77	18	Surface	1	28.99		9.07		
259.21	19	Surface	1	20.02	20.02	6.67	6.67	4254.14
262.38	20	Surface	1	12.69	15.11	3.79	4.23	4412.54
262.42	20	Surface	1	15.82		4.42		
262.46	20	Surface	1	16.83		4.48		
264.83	21	Surface	1	0.00	0.00	0.00	0.00	0.00
264.99	21	Surface	1	0.00		0.00		
4.46	1	Tile	1	1.40	1.40	0.81	0.81	525.00
10.42	2	Tile	1	0.48	0.48	0.28	0.28	3858.00
11.67	2	Tile	1	1.40		0.81		
17.67	3	Tile	1	1.68	1.75	1.38	1.14	25372.00
18.06	3	Tile	1	1.82		0.89		
24.00	4	Tile	1	1.40	1.40	0.81	0.81	9560.00

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
32.00	5	Tile	1	1.40	1.40	0.81	0.81	11042.
37.54	6	Tile	1	1.40	0.93	0.81	0.88	17419.00
37.81	6	Tile	1	0.93		0.88		
38.58	6	Tile	1	1.40		0.81		
38.60	6	Tile	1	1.40		0.81		
39.58	6	Tile	1	1.40		0.81		
45.44	7	Tile	1	1.40	1.40	0.81	0.81	3714.00
53.19	8	Tile	1	1.40	1.40	0.81	0.81	38982.00
53.42	8	Tile	1	1.40		0.81		
70.63	9	Tile	1	1.40	1.40	0.81	0.81	35962.00
92.44	10	Tile	1	1.40	1.40	0.81	0.81	6792.00
100.67	11	Tile	1	1.40	1.40	0.81	0.81	22835.00
101.46	11	Tile	1	1.40		0.81		
111.13	12	Tile	1	1.40	1.40	0.81	0.81	7104.00
124.69	13	Tile	1	1.40	1.40	0.81	0.81	12494.00
133.60	14	Tile	1	1.40	1.40	0.81	0.81	17945.00
134.60	14	Tile	1	1.40		0.81		
136.33	15	Tile	1	1.40	2.07	0.81	2.25	33715.00
136.63	15	Tile	1	1.40		0.81		
137.47	15	Tile	1	2.07		2.25		
159.29	16	Tile	1	162.69	143.53	20.64	19.41	3540.00
159.33	16	Tile	1	180.51		23.44		
159.44	16	Tile	1	87.39		14.14		
179.44	16	Tile	1	0.00		0.00		
195.40	17	Tile	1	26.25	16.56	11.62	7.70	2743.00
195.44	17	Tile	1	9.56		5.54		
195.58	17	Tile	1	13.89		5.95		
224.67	18	Tile	1	6.54	6.54	2.07	2.07	109.00
225.29	19	Tile	1	6.54	6.54	2.07	2.07	1187.00
231.38	20	Tile	1	1.89	1.89	1.88	1.88	2828.00
249.81	21	Tile	1	0.00	22.65	0.00	10.90	34342.00
249.95	21	Tile	1	22.96		9.73		
249.99	21	Tile	1	23.23		11.31		
250.03	21	Tile	1	26.50		12.19		
250.44	21	Tile	1	24.23		12.45		
250.69	21	Tile	1	16.32		8.82		
257.67	22	Tile	1	11.94	15.73	7.17	8.27	14459.00
257.73	22	Tile	1	17.41		8.70		
257.77	22	Tile	1	17.30		8.75		
257.83	22	Tile	1	16.26		8.47		

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
259.21	23	Tile	1	8.88	8.88	5.44	5.44	11953.00
262.38	24	Tile	1	8.95	11.19	5.47	5.95	10541.00
262.42	24	Tile	1	11.62		5.73		
262.46	24	Tile	1	10.93		5.46		
262.57	24	Tile	1	12.51		6.53		
262.67	24	Tile	1	11.93		6.54		
264.83	25	Tile	1	8.90	8.90	5.46	5.46	4731.00
4.38	1	Surface	2	0.95	0.57	3.64	1.96	15406.71
4.46	1	Surface	2	0.18		0.28		
10.42	2	Surface	2	0.00	0.00	0.00	0.00	0.00
18.06	3	Surface	2	5.96	5.96	2.87	2.87	2201.42
37.65	4	Surface	2	2.36	2.36	2.27	2.27	2353.35
38.55	5	Surface	2	2.36	2.36	2.27	2.27	2013.93
38.56	5	Surface	2	2.36		2.27		
38.60	5	Surface	2	2.36		2.27		
53.21	6	Surface	2	2.36	2.60	2.27	1.44	22256.66
53.42	6	Surface	2	2.60		1.44		
58.00	7	Surface	2	0.00	0.00	0.00	0.00	0.00
100.67	8	Surface	2	4.00	4.00	1.73	1.73	3895.32
133.63	9	Surface	2	2.36	2.36	2.27	2.27	5944.81
136.35	10	Surface	2	2.36	2.36	2.27	2.27	5925.41
136.63	10	Surface	2	2.36		2.27		
137.47	11	Surface	2	2.36	2.36	2.27	2.27	3358.70
159.29	12	Surface	2	468.91	468.91	65.82	65.82	921.30
159.32	12	Surface	2	0.00		0.00		
195.45	13	Surface	2	0.00	0.00	0.00	0.00	0.00
225.29	14	Surface	2	0.00	0.00	0.00	0.00	0.00
231.38	15	Surface	2	0.86	0.86	0.07	0.07	2721.87
249.95	16	Surface	2	26.28	31.32	6.11	7.71	5243.33
249.99	16	Surface	2	36.36		9.31		
250.03	17	Surface	2	44.48	51.32	11.34	12.69	5802.57
250.44	17	Surface	2	58.16		14.04		
257.67	18	Surface	2	16.29	21.38	4.00	6.20	5201.30
257.73	18	Surface	2	17.25		5.60		
257.77	18	Surface	2	30.59		9.01		
259.21	19	Surface	2	17.41	17.41	5.00	5.00	6633.36
262.38	20	Surface	2	7.51	9.82	2.30	3.63	5556.89
262.42	20	Surface	2	13.91		4.81		
262.46	20	Surface	2	8.04		3.79		
264.79	21	Surface	2	7.64	7.09	2.50	2.38	1984.83

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
264.83	21	Surface	2	6.55		2.26		
4.46	1	Tile	2	1.50	1.50	0.69	0.69	730.00
10.42	2	Tile	2	0.23	0.23	0.20	0.20	4501.00
11.67	2	Tile	2	1.50		0.69		
17.67	3	Tile	2	1.26	1.71	0.19	0.57	15256.00
18.06	3	Tile	2	2.15		0.95		
24.00	4	Tile	2	1.50	1.50	0.69	0.69	8857.00
32.00	5	Tile	2	1.50	1.50	0.69	0.69	7666.00
37.54	6	Tile	2	1.50	1.50	0.69	0.69	18335.00
37.61	6	Tile	2	1.50		0.69		
38.56	6	Tile	2	1.50		0.69		
38.60	6	Tile	2	1.50		0.69		
39.56	6	Tile	2	1.50		0.69		
45.88	7	Tile	2	1.50	1.50	0.69	0.69	7550.00
53.19	8	Tile	2	1.50	1.50	0.69	0.69	15497.00
53.42	8	Tile	2	1.50		0.69		
70.63	9	Tile	2	1.50	1.50	0.69	0.69	26640.00
92.44	10	Tile	2	1.50	1.50	0.69	0.69	4570.00
100.67	11	Tile	2	1.50	1.50	0.69	0.69	10314.00
101.46	11	Tile	2	1.50		0.69		
111.13	12	Tile	2	1.50	1.50	0.69	0.69	4339.00
124.69	13	Tile	2	1.50	1.50	0.69	0.69	7175.00
133.60	14	Tile	2	1.50	1.50	0.69	0.69	8251.00
134.60	14	Tile	2	1.50		0.69		
136.33	15	Tile	2	1.50	2.38	0.69	1.42	15879.00
136.63	15	Tile	2	1.50		0.69		
137.47	15	Tile	2	2.38		1.42		
159.29	16	Tile	2	16.06	69.87	2.43	10.49	4154.00
159.33	16	Tile	2	61.02		10.63		
159.44	16	Tile	2	132.54		18.40		
179.44	16	Tile	2	0.00		0.00		
195.40	17	Tile	2	30.36	20.44	8.97	6.25	3653.00
195.44	17	Tile	2	9.63		3.57		
195.58	17	Tile	2	21.33		6.21		
224.67	18	Tile	2	3.78	3.78	1.35	1.35	261.00
225.29	19	Tile	2	3.78	3.78	1.35	1.35	2303.00
231.38	20	Tile	2	10.76	10.76	3.33	3.33	3161.00
249.81	21	Tile	2	3.61	18.02	2.07	5.75	26348.00
249.95	21	Tile	2	24.83		6.70		
249.99	21	Tile	2	11.78		5.06		

Appendix 15B. Surface and subsurface atrazine and des-ethyl atrazine concentrations, event concentrations and water volumes for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Atrazine Conc., ug/L	Event Atrazine Conc., ug/L	Metabolite Conc., ug/L	Event Metabolite Conc., ug/L	Event Volume, L/plot
250.03	21	Tile	2	33.50		7.50		
250.44	21	Tile	2	12.52		5.57		
250.69	21	Tile	2	21.88		7.63		
257.67	22	Tile	2	14.93	18.86	5.70	6.42	5887.00
257.73	22	Tile	2	22.26		6.56		
257.77	22	Tile	2	16.09		5.65		
257.83	22	Tile	2	22.15		7.76		
259.21	23	Tile	2	9.50	9.50	4.29	4.29	3753.00
262.38	24	Tile	2	10.25	16.01	4.94	5.17	3887.00
262.42	24	Tile	2	15.22		4.39		
262.46	24	Tile	2	16.27		4.19		
262.57	24	Tile	2	20.46		5.99		
262.67	24	Tile	2	17.85		6.35		
264.83	25	Tile	2	15.76	15.76	5.46	5.46	2547.00

Appendix 16B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for zero tillage, 1990

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Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
4	1	Surface	1	8269	184.81	603.64	69.38
10	2	Surface	1	10060	198.18	290.73	31.83
18	3	Surface	1	0	0.00	0.00	
38	4	Surface	1	0	0.00	0.00	
39	5	Surface	1	8586	184.60	500.56	63.12
53	6	Surface	1	17114	205.36	835.14	75.41
58	7	Surface	1	0	0.00	0.00	
101	8	Surface	1	4041	88.90	118.01	24.67
134	9	Surface	1	4584	98.55	267.24	63.12
136	10	Surface	1	5521	118.71	321.89	63.12
137	11	Surface	1	3023	64.98	178.21	63.12
159	12	Surface	1	0	0.00	0.00	
195	13	Surface	1	0	0.00	0.00	
225	14	Surface	1	0	0.00	0.00	
231	15	Surface	1	0	0.00	0.00	
250	16	Surface	1	6940	952.27	1163.87	18.18
250	17	Surface	1	7131	1375.06	1655.96	16.96
258	18	Surface	1	7574	673.38	875.02	23.04
259	19	Surface	1	5964	593.45	732.62	19.00
262	20	Surface	1	5531	382.90	501.98	23.72
265	21	Surface	1	2641	254.50	332.80	23.53
4	1	Tile	1	0	0.00		
12	2	Tile	1	166	1.41	2.72	48.17
18	3	Tile	1	12822	96.81	235.28	58.86
24	4	Tile	1	6783	57.66	111.24	48.17
32	5	Tile	1	8745	74.33	143.42	48.17
38	6	Tile	1	11849	82.72	176.33	53.09
45	7	Tile	1	2468	20.98	40.48	48.17
53	8	Tile	1	27825	236.51	456.33	48.17
70	9	Tile	1	18227	162.22	264.29	38.62
92	10	Tile	1	5811	49.39	95.30	48.17
101	11	Tile	1	16813	142.91	275.73	48.17
111	12	Tile	1	4821	40.98	79.06	48.17
125	13	Tile	1	8919	75.81	146.27	48.17
134	14	Tile	1	12876	109.45	211.17	48.17
136	15	Tile	1	15848	264.13	452.80	41.67
159	16	Tile	1	6302	13806.78	15026.60	8.12
195	17	Tile	1	1386	288.10	419.27	31.29
225	18	Tile	1	0	0.00	0.00	
225	19	Tile	1	547	16.62	25.54	34.92

Appendix 16B.

Surface and subsurface transport of atrazine and percent metabolite for each event for zero tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
231	20	Tile	1	3231.00	128.02	222.29	42.41
250	21	Tile	1	17853	1732.62	2594.72	33.22
258	22	Tile	1	8800	757.81	1116.28	32.11
259	23	Tile	1	6695	440.46	659.70	33.23
262	24	Tile	1	5509	372.92	549.41	32.12
265	25	Tile	1	2643	155.44	235.63	34.03
4	1	Surface	2	14211	132.16	480.32	72.49
10	2	Surface	2	5932	205.24	277.61	26.07
18	3	Surface	2	2489	57.75	75.17	23.18
38	4	Surface	2	3126	59.71	112.85	47.09
39	5	Surface	2	3204	61.19	115.65	47.09
53	6	Surface	2	17912	182.70	260.13	29.77
58	7	Surface	2	0	0.00	0.00	
101	8	Surface	2	2938	82.28	107.68	23.59
134	9	Surface	2	3423	65.39	123.58	47.09
136	10	Surface	2	4274	81.62	154.27	47.09
137	11	Surface	2	1704	32.54	61.50	47.09
159	12	Surface	2	1322.15	10082.95	10831.56	6.91
195	13	Surface	2	0	0.00	0.00	
225	14	Surface	2	0	0.00	0.00	
231	15	Surface	2	4186.26	16.10	37.30	56.83
250	16	Surface	2	5864	840.81	1018.33	17.43
250	17	Surface	2	5906	1242.67	1567.24	20.71
258	18	Surface	2	5841	689.83	858.93	19.69
259	19	Surface	2	6792	664.53	807.92	17.75
262	20	Surface	2	7610	643.32	815.25	21.09
265	21	Surface	2	2673	258.83	337.37	23.28
4	1	Tile	2	0	0.00	0.00	
10	2	Tile	2	2126	11.91	26.79	55.56
18	3	Tile	2	13559	250.84	713.20	64.83
24	4	Tile	2	6043	59.83	129.92	53.95
32	5	Tile	2	7237	71.65	155.60	53.95
38	6	Tile	2	11115	110.04	227.86	51.71
45	7	Tile	2	5222	51.70	112.27	53.95
53	8	Tile	2	15878	157.19	341.38	53.95
70	9	Tile	2	25729	254.72	411.66	38.13
92	10	Tile	2	5744	56.87	123.50	53.95
101	11	Tile	2	12052	119.31	259.12	53.95
111	12	Tile	2	5268	52.15	113.26	53.95

Appendix 16B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for zero tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
125	13	Tile	2	8718	86.31	187.44	53.95
134	14	Tile	2	8237	81.55	177.10	53.95
136	15	Tile	2	11331	112.18	243.62	53.95
159	16	Tile	2	14459	50316.44	53849.50	6.56
195	17	Tile	2	4853	1127.84	1549.67	27.22
225	18	Tile	2	135	4.23	8.43	34.24
225	19	Tile	2	1770	55.41	84.27	34.24
231	20	Tile	2	2531	110.40	191.75	42.43
250	21	Tile	2	20840	4126.86	5564.07	25.83
258	22	Tile	2	4674	476.47	702.08	32.13
259	23	Tile	2	2936	272.84	392.21	30.44
262	24	Tile	2	2975	221.07	321.11	31.15
265	25	Tile	2	1462	200.72	292.98	31.49

Appendix 17B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for ridge tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
4	1	Surface	1	11740.91	141.48	740.26	80.89
10	2	Surface	1	6074.11	90.50	105.69	14.37
18	3	Surface	1	0.00	0.00	0.00	
38	4	Surface	1	0.00	0.00	0.00	
39	5	Surface	1	9245.32	120.19	441.93	72.80
53	6	Surface	1	18348.41	256.88	415.51	38.18
58	7	Surface	1	0.00	0.00	0.00	
101	8	Surface	1	3959.97	51.48	117.87	56.25
134	9	Surface	1	4855.41	63.12	232.09	72.80
136	10	Surface	1	6727.10	87.45	321.56	72.80
137	11	Surface	1	3769.25	49.00	180.17	72.80
159	12	Surface	1	0.00	0.00	0.00	
195	13	Surface	1	0.00	0.00	0.00	
225	14	Surface	1	0.00	0.00	0.00	
231	15	Surface	1	4289.70	12.26	14.37	14.74
250	16	Surface	1	7590.22	501.54	636.18	21.16
250	17	Surface	1	9720.52	1312.49	1651.39	20.52
258	18	Surface	1	6238.98	670.36	860.59	22.11
259	19	Surface	1	6293.93	542.76	696.61	22.09
262	20	Surface	1	6468.49	379.52	515.20	26.34
265	21	Surface	1	1241.33	167.58	238.71	29.80
4	1	Tile	1	624.00	9.30	20.37	54.36
10	2	Tile	1	4957.00	81.29	153.67	47.10
18	3	Tile	1	13052.00	155.97	469.22	66.76
24	4	Tile	1	5404.00	72.41	185.36	60.93
32	5	Tile	1	5532.00	74.13	189.75	60.93
38	6	Tile	1	11738.00	157.29	217.28	27.61
46	7	Tile	1	1255.00	16.82	43.05	60.93
53	8	Tile	1	26871.00	360.07	921.68	60.93
71	9	Tile	1	20169.00	270.26	691.80	60.93
92	10	Tile	1	5723.00	76.69	196.30	60.93
101	11	Tile	1	13866.00	185.80	475.60	60.93
111	12	Tile	1	4209.00	56.40	144.37	60.93
125	13	Tile	1	7829.00	104.91	268.53	60.93
134	14	Tile	1	9866.00	132.20	338.40	60.93
136	15	Tile	1	14257.00	194.41	359.90	45.98
159	16	Tile	1	7135.00	17932.41	19573.60	8.38
195	17	Tile	1	902.00	102.93	152.93	32.70
225	18	Tile	1	0.00	0.00	0.00	
225	19	Tile	1	990.00	29.17	46.39	37.12
231	20	Tile	1	2472.00	47.19	82.03	42.47

Appendix 17B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for ridge tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
250	21	Tile	1	16113.00	1967.47	3021.45	34.88
258	22	Tile	1	8152.00	727.47	1202.36	39.50
259	23	Tile	1	5274.00	342.64	569.67	39.75
262	24	Tile	1	4834.00	303.23	489.12	38.01
265	25	Tile	1	2084.00	141.29	229.81	38.52
4	1	Surface	2	15733.21	54.28	861.39	93.70
10	2	Surface	2	6491.12	25.98	31.16	16.67
18	3	Surface	2	2941.69	31.48	49.42	36.31
38	4	Surface	2	4021.39	21.72	131.90	83.54
39	5	Surface	2	3620.55	19.55	118.75	83.54
53	6	Surface	2	19466.90	97.33	125.38	22.37
58	7	Surface	2	0.00	0.00	0.00	
101	8	Surface	2	5343.54	88.70	104.10	14.79
134	9	Surface	2	6533.15	35.28	214.29	83.54
136	10	Surface	2	6109.67	32.99	200.40	83.54
137	11	Surface	2	4144.23	22.38	135.93	83.54
159	12	Surface	2	2828.55	16303.11	17483.72	6.75
195	13	Surface	2	1305.98	1084.97	1275.78	14.96
225	14	Surface	2	1900.79	272.07	308.79	11.89
231	15	Surface	2	5094.62	7.87	18.19	56.74
250	16	Surface	2	5398.49	750.76	874.68	14.17
250	17	Surface	2	6061.18	1244.33	1453.51	14.39
258	18	Surface	2	8126.83	904.94	1115.01	18.84
259	19	Surface	2	6345.65	519.86	629.85	17.46
262	20	Surface	2	8967.32	534.20	650.51	17.88
265	21	Surface	2	2683.08	282.94	360.09	21.43
4	1	Tile	2	0.00	0.00	0.00	
10	2	Tile	2	3381.00	21.13	32.29	34.55
18	3	Tile	2	13714.00	110.40	174.85	36.86
24	4	Tile	2	5813.00	48.25	77.89	38.06
32	5	Tile	2	7033.00	58.37	94.24	38.06
38	6	Tile	2	13331.00	71.99	114.65	37.21
46	7	Tile	2	3303.00	27.41	44.26	38.06
53	8	Tile	2	20929.00	173.71	280.45	38.06
71	9	Tile	2	26822.00	222.62	359.41	38.06
92	10	Tile	2	5936.00	49.27	79.54	38.06
101	11	Tile	2	10529.00	87.39	141.09	38.06
111	12	Tile	2	5061.00	42.01	67.82	38.06
125	13	Tile	2	7163.00	59.45	95.98	38.06
134	14	Tile	2	5144.00	42.70	68.93	38.06
136	15	Tile	2	8562.00	55.65	95.04	41.44

Appendix 17B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for ridge tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
159	16	Tile	2	15285.00	49215.24	52153.29	5.63
195	17	Tile	2	6879.00	1028.33	1361.37	24.46
225	18	Tile	2	0.00	0.00	0.00	
225	19	Tile	2	881.00	21.18	30.97	31.61
231	20	Tile	2	2874.00	58.37	92.39	38.98
250	21	Tile	2	14125.00	2034.40	2678.92	24.06
258	22	Tile	2	4041.00	487.15	650.67	28.20
259	23	Tile	2	3265.00	185.27	264.20	29.88
262	24	Tile	2	3002.00	224.80	297.95	24.55
265	25	Tile	2	1236.00	77.51	110.51	29.88

Appendix 18B.

Surface and subsurface transport of atrazine and percent
metabolite for each event for conventional tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
4	1	Surface	1	13768	56.45	512.85	88.99
10	2	Surface	1	0	0.00	0.00	
18	3	Surface	1	0	0.00	0.00	
38	4	Surface	1	0	0.00	0.00	
39	5	Surface	1	0	0.00	0.00	
53	6	Surface	1	22784	93.41	847.55	88.98
58	7	Surface	1	5263	21.58	195.77	88.98
101	8	Surface	1	0	0.00	0.00	
134	9	Surface	1	0	0.00	0.00	
136	10	Surface	1	0	0.00	0.00	
137	11	Surface	1	0	0.00	0.00	
159	12	Surface	1	2224	7765.95	8599.96	9.70
195	13	Surface	1	0	0.00	0.00	
225	14	Surface	1	0	0.00	0.00	
231	15	Surface	1	0	0.00	0.00	
250	16	Surface	1	5104	1883.87	2586.48	27.16
250	17	Surface	1	6116	3144.89	4134.27	23.93
258	18	Surface	1	4678	1077.22	1430.02	24.67
259	19	Surface	1	4254	851.89	1135.50	24.98
262	20	Surface	1	4413	666.88	853.58	21.87
265	21	Surface	1	0	0.00	0.00	
4	1	Tile	1	525	7.35	11.60	36.65
10	2	Tile	1	3858	18.52	29.32	36.84
18	3	Tile	1	25372	444.01	731.98	39.34
24	4	Tile	1	9560	133.84	211.28	36.65
32	5	Tile	1	11042	154.59	244.03	36.65
38	6	Tile	1	17419	162.00	315.28	48.62
45	7	Tile	1	3714	52.00	82.08	36.65
53	8	Tile	1	38982	545.75	861.50	36.65
71	9	Tile	1	35962	503.47	794.76	36.65
92	10	Tile	1	6792	95.09	150.10	36.65
101	11	Tile	1	22835	319.69	504.65	36.65
111	12	Tile	1	7104	99.46	157.00	36.65
125	13	Tile	1	12494	174.92	276.12	36.65
134	14	Tile	1	17945	251.23	396.58	36.65
136	15	Tile	1	33715	699.27	1457.86	52.03
159	16	Tile	1	3540	5081.03	5768.04	11.91
195	17	Tile	1	2743	454.37	665.62	31.74
225	18	Tile	1	109	7.13	9.38	24.01
225	19	Tile	1	1187	77.60	102.12	24.01
231	20	Tile	1	2828	53.46	106.69	49.89

Appendix 1B8.

Surface and subsurface transport of atrazine and percent
metabolite for each event for conventional tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
250	21	Tile	1	34342	7778.19	11520.97	32.49
258	22	Tile	1	14459	2274.30	3470.36	34.46
259	23	Tile	1	11953	1061.62	1711.81	37.98
262	24	Tile	1	10541	1179.59	1806.34	34.70
265	25	Tile	1	4731	420.98	679.35	38.03
4	1	Surface	2	15407	87.05	389.02	77.62
10	2	Surface	2	0	0.00	0.00	
18	3	Surface	2	2201	131.20	194.39	32.50
38	4	Surface	2	2353	55.54	108.96	49.03
39	5	Surface	2	2014	47.53	93.24	49.03
53	6	Surface	2	22257	578.67	899.37	35.66
58	7	Surface	2	0	0.00	0.00	
101	8	Surface	2	3895	155.81	223.17	30.18
134	9	Surface	2	5945	140.30	275.24	49.03
136	10	Surface	2	5925	139.84	274.35	49.03
137	11	Surface	2	3359	79.27	155.51	49.03
159	12	Surface	2	921	4320.05	4926.41	12.31
195	13	Surface	2	0	0.00	0.00	
225	14	Surface	2	0	0.00	0.00	
231	15	Surface	2	2722	23.33	25.35	7.95
250	16	Surface	2	5243	1642.19	2046.48	19.76
250	17	Surface	2	5803	2977.82	3714.37	19.83
258	18	Surface	2	5201	1111.91	1434.61	22.49
259	19	Surface	2	6633	1155.06	1486.73	22.31
262	20	Surface	2	5557	545.72	747.52	27.00
265	21	Surface	2	1985	140.74	187.99	25.13
4	1	Tile	2	730	10.95	15.99	31.51
10	2	Tile	2	4501	10.35	19.35	46.51
18	3	Tile	2	15256	260.11	347.07	25.05
24	4	Tile	2	8857	132.86	193.97	31.51
32	5	Tile	2	7666	114.99	167.89	31.51
38	6	Tile	2	18335	275.03	401.54	31.51
46	7	Tile	2	7550	113.25	165.35	31.51
53	8	Tile	2	15497	232.46	339.38	31.51
71	9	Tile	2	26640	399.60	583.42	31.51
92	10	Tile	2	4570	68.55	100.08	31.51
101	11	Tile	2	10314	154.71	225.88	31.51
111	12	Tile	2	4339	65.09	95.02	31.51
125	13	Tile	2	7175	107.63	157.13	31.51
134	14	Tile	2	8251	123.77	180.70	31.51
136	15	Tile	2	15879	377.92	603.40	37.37

Appendix 18B.

Surface and subsurface transport of atrazine and percent metabolite for each event for conventional tillage, 1990

- 3

Julian Time/90	Event #	Source	Rep	Event Volume, L/plot	Atrazine loss, mg/ha	Triazine loss, mg/ha	Metabolite %
159	16	Tile	2	4154	2902.53	3338.08	13.05
195	17	Tile	2	3653	746.67	975.05	23.42
225	18	Tile	2	261	9.85	13.37	26.31
225	19	Tile	2	2303	86.95	117.99	26.31
231	20	Tile	2	3161	340.18	445.55	23.65
250	21	Tile	2	26348	4748.00	6263.70	24.20
258	22	Tile	2	5887	1110.06	1487.95	25.40
259	23	Tile	2	3753	356.47	517.32	31.09
262	24	Tile	2	3887	622.32	823.29	24.41
265	25	Tile	2	2547	401.48	540.57	25.73

Appendix 19B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

- 1

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
17.40	1	Surface	1	1	1	0.47	0.47	53.94	11475.90
32.56	2	Surface	1	1	1	1.25	1.25	61.42	4913.60
48.00	3	Surface	1	0	0		1.25	24.65	1971.90
50.00	4	Surface	1	0	0		1.25	134.15	10732.30
276.00	5	Surface	1	0	0		0.00	0.00	0.00
291.96	6	Surface	1	1	0		5.06	122.60	2424.50
292.06	6	Surface	1	1	1	5.61			
292.08	6	Surface	1	1	1	8.29			
292.10	6	Surface	1	1	1	1.27			
297.00	7	Surface	1	0	0		0.00	0.00	0.00
310.00	8	Surface	1	0	0		6.14	234.08	3814.50
310.46	8	Surface	1	1	1	6.25			
310.56	8	Surface	1	1	1	4.92			
310.65	8	Surface	1	1	1	4.85			
310.83	8	Surface	1	1	1	8.53			
312.00	9	Surface	1	1	0		6.14	37.69	614.20
315.20	10	Surface	1	1	1	2.09	4.01	71.20	1777.90
315.25	10	Surface	1	1	1	5.92			
318.19	11	Surface	1	1	1	5.00	5.00	143.85	2877.00
321.57	12	Surface	1	1	1	2.38	2.19	30.44	1390.00
321.61	12	Surface	1	1	1	2.00			
325.61	13	Surface	1	1	1	5.00	3.94	178.16	4525.70
325.65	13	Surface	1	1	1	3.45			
325.81	13	Surface	1	1	1	3.36			
363.38	14	Surface	1	1	1	6.03	6.03	83.82	1390.00
17.35	1	Tile	1	0	0		0.00	0.00	0.00
32.56	2	Tile	1	1	1	0.05	0.05	0.66	1329.00
72.66	3	Tile	1	1	0		0.05	0.87	1735.00
84.39	4	Tile	1	1	1	0.06	0.05	4.61	8651.00
84.67	4	Tile	1	1	1	0.05			
85.42	4	Tile	1	1	1	0.05			
94.88	5	Tile	1	0	0		0.05	1.62	3034.00
97.92	6	Tile	1	1	0		0.05	3.86	7232.00
114.31	7	Tile	1	0	0		0.00	0.00	39.00
136.85	8	Tile	1	0	0		0.00	0.00	48.00
154.27	9	Tile	1	1	1	8.33	8.33	9.75	117.00
192.96	10	Tile	1	1	1	17.62	17.62	47.57	270.00
267.10	11	Tile	1	1	1	0.77	0.77	1.16	151.00
267.13	11	Tile	1	0	0				
267.38	11	Tile	1	0	0				

Appendix 198. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
276.41	12	Tile	1	1	1	1.31	1.16	32.83	2830.00
276.43	12	Tile	1	1	1	1.67			
276.44	12	Tile	1	1	1	1.36			
276.60	12	Tile	1	1	1	0.30			
277.44	12	Tile	1	0	0				
291.92	13	Tile	1	1	1	2.81	3.10	443.40	14323.00
291.96	13	Tile	1	1	1	1.34			
292.06	13	Tile	1	1	1	5.59			
292.10	13	Tile	1	1	1	5.56			
292.15	13	Tile	1	1	1	3.57			
292.38	13	Tile	1	1	1	2.12			
292.67	13	Tile	1	1	1	0.68			
297.74	14	Tile	1	1	1	1.93	1.99	91.34	4590.00
297.77	14	Tile	1	1	1	2.05			
310.38	15	Tile	1	1	1	2.50	3.76	691.39	18406.00
310.44	15	Tile	1	1	1	3.96			
310.56	15	Tile	1	1	1	4.90			
310.65	15	Tile	1	1	1	4.30			
310.83	15	Tile	1	1	1	7.01			
311.33	15	Tile	1	1	1	1.81			
312.40	15	Tile	1	1	1	1.81			
315.20	16	Tile	1	1	1	1.84	2.16	135.69	6282.00
315.24	16	Tile	1	1	1	2.56			
315.28	16	Tile	1	1	0				
315.46	16	Tile	1	1	1	2.08			
318.19	17	Tile	1	1	1	4.49	4.49	409.98	9131.00
321.58	18	Tile	1	1	1	2.20	2.20	124.21	5646.00
325.63	19	Tile	1	1	1	2.00	1.95	171.39	8789.00
325.83	19	Tile	1	1	1	1.06			
326.40	19	Tile	1	1	1	2.79			
359.68	20	Tile	1	1	1	3.83	2.30	297.66	12926.00
362.46	20	Tile	1	1	1	0.37			
363.38	20	Tile	1	1	1	2.71			
17.40	1	Surface	2	1	1	0.23	0.23	39.33	17100.60
32.56	2	Surface	2	1	1	0.42	0.42	0.00	0.00
48.00	3	Surface	2	0	0		0.42	20.09	4784.30
50.00	4	Surface	2	0	0		0.42	53.36	12704.20
276.00	5	Surface	2	0	0		4.25	22.00	517.20
291.96	6	Surface	2	0	0		4.25	193.87	4558.00
292.06	6	Surface	2	1	1	7.07			

Appendix 19B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metal., mg.	Event Volume, L/plot
292.08	6	Surface	2	1	1	5.00			
292.10	6	Surface	2	1	1	0.69			
297.00	7	Surface	2	0	0		4.86	25.15	517.20
310.00	8	Surface	2	0	0		4.86	196.48	4040.80
310.46	8	Surface	2	1	1	5.62			
310.56	8	Surface	2	1	1	5.71			
310.65	8	Surface	2	1	1	2.39			
310.83	8	Surface	2	1	1	5.73			
312.00	9	Surface	2	1	0		4.86	33.01	678.90
315.20	10	Surface	2	1	1	4.88	5.13	76.28	1487.00
315.25	10	Surface	2	1	1	5.38			
318.19	11	Surface	2	1	1	5.00	5.00	182.65	3652.90
321.57	12	Surface	2	1	1	2.73	2.31	51.41	2230.50
321.61	12	Surface	2	1	1	1.88			
325.61	13	Surface	2	1	1	3.25	3.07	165.73	5398.50
325.65	13	Surface	2	1	1	2.64			
325.81	13	Surface	2	1	1	3.32			
363.38	14	Surface	2	1	1	2.60	2.60	109.26	4202.40
17.35	1	Tile	2	0	0		0.23	0.79	342.00
32.56	2	Tile	2	1	1	0.23	0.23	0.66	285.00
72.66	3	Tile	2	1	0		0.23	3.53	1533.00
84.39	4	Tile	2	1	1	0.05	0.05	4.33	8658.00
84.67	4	Tile	2	1	1	0.05			
85.42	4	Tile	2	1	1	0.05			
94.88	5	Tile	2	0	0		0.05	1.22	2439.00
97.92	6	Tile	2	1	0		0.05	2.62	5245.00
114.31	7	Tile	2	0	0		0.05	0.06	117.00
136.85	8	Tile	2	0	0		0.05	0.06	114.00
154.27	9	Tile	2	1	1	0.12	0.12	1.35	1126.00
192.96	10	Tile	2	1	1	15.71	15.71	53.89	343.00
267.10	11	Tile	2	0	0		0.86	1.81	211.00
267.13	11	Tile	2	0	0				
267.38	11	Tile	2	1	1	0.86			
276.41	12	Tile	2	1	1	1.90	1.23	52.64	4273.00
276.43	12	Tile	2	1	1	1.90			
276.44	12	Tile	2	1	1	0.61			
276.60	12	Tile	2	1	1	1.52			
277.44	12	Tile	2	1	1	0.23			
291.92	13	Tile	2	1	1	1.99	3.17	365.48	11545.00
291.96	13	Tile	2	1	1	1.22			

Appendix 198. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1988

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume L/plot
292.08	13	Tile	2	1	1	4.88			
292.10	13	Tile	2	1	1	4.17			
292.15	13	Tile	2	1	1	4.29			
292.38	13	Tile	2	1	1	4.27			
292.67	13	Tile	2	1	1	1.34			
297.74	14	Tile	2	1	1	1.09	1.42	109.61	7719.00
297.77	14	Tile	2	1	1	1.75			
310.38	15	Tile	2	1	1	2.85	3.68	351.83	9563.00
310.44	15	Tile	2	1	1	4.36			
310.56	15	Tile	2	1	1	3.65			
310.65	15	Tile	2	1	1	5.36			
310.83	15	Tile	2	1	1	5.06			
311.33	15	Tile	2	1	1	1.82			
312.40	15	Tile	2	1	1	2.66			
315.20	16	Tile	2	1	0		4.25	155.90	3671.00
315.24	16	Tile	2	1	1	2.82			
315.28	16	Tile	2	1	1	3.49			
315.46	16	Tile	2	1	1	6.43			
318.19	17	Tile	2	1	1	4.91	4.91	321.46	6547.00
321.58	18	Tile	2	1	1	2.50	2.50	98.68	3947.00
325.63	19	Tile	2	1	1	3.93	3.11	199.92	6419.00
325.83	19	Tile	2	1	1	2.58			
326.40	19	Tile	2	1	1	2.83			
359.68	20	Tile	2	1	1	0.45	1.62	138.72	8554.00
362.46	20	Tile	2	1	1	0.38			
363.38	20	Tile	2	1	1	4.04			

Appendix 208. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
17.40	1	Surface	1	1	1	0.63	0.63	56.01	8889.70
32.56	2	Surface	1	1	1	0.47	0.47	13.67	2909.40
48.00	3	Surface	1	0	0		0.47	10.94	2327.50
50.00	4	Surface	1	0	0		0.47	69.74	14837.80
276	5	Surface	1	1	1	0.42	0.42		0.00
291	6	Surface	1	1	1	0.50	1.36	63.40	4655.00
291	6	Surface	1	1	1	0.42			
292	6	Surface	1	0	0				
292	6	Surface	1	1	1	3.45			
292	6	Surface	1	1	1	2.44			
292	6	Surface	1	1	1	3.08			
297	7	Surface	1	0	0		0.00		0.00
310	8	Surface	1	0	0		3.26	90.70	2780.10
310	8	Surface	1	1	1	0.75			
311	8	Surface	1	1	1	3.90			
311	8	Surface	1	1	1	3.33			
311	8	Surface	1	1	1	5.07			
312	9	Surface	1	0	0		3.26	10.55	323.30
315	10	Surface	1	1	1	1.55	2.22	27.99	1260.70
315	10	Surface	1	1	1	2.89			
318	11	Surface	1	1	1	1.29	1.29	34.20	2650.80
322	12	Surface	1	1	1	4.56	3.78	28.10	743.50
322	12	Surface	1	1	1	3.00			
325	13	Surface	1	1	1	2.40	2.07	91.67	4428.70
325	13	Surface	1	1	1	0.81			
326	13	Surface	1	1	1	1.19			
326	13	Surface	1	1	1	2.36			
326	13	Surface	1	1	1	3.59			
363	14	Surface	1	1	1	2.25	2.25	34.18	1519.30
17.35	1	Tile	1	0	0		0.27	1.34	498.00
32.56	2	Tile	1	1	1	0.27	0.27	6.38	2363.00
73	3	Tile	1	1	1	0.05	0.05	0.98	1967.00
84	4	Tile	1	1	1	0.05	0.30	25.88	8725.00
85	4	Tile	1	1	1	0.05			
85	4	Tile	1	1	1	0.79			
95	5	Tile	1	0	0		0.30	8.60	2898.00
98	6	Tile	1	1	0		0.30	20.04	6755.00
114	7	Tile	1	0	0		0.30	0.46	156.00
137	8	Tile	1	0	0		0.30	0.18	62.00
154	9	Tile	1	1	1	13.19	13.19	63.05	478.00

Appendix 20B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
193	10	Tile	1	1	1	3.33	3.33	1.20	36.00
267	11	Tile	1	1	0		0.78	1.44	184.00
267	11	Tile	1	1	1	0.28			
267	11	Tile	1	0	0				
267	11	Tile	1	1	1	1.28			
276	12	Tile	1	1	1	0.71	0.69	14.41	2104.00
276	12	Tile	1	1	1	0.38			
276	12	Tile	1	1	1	1.52			
277	12	Tile	1	1	1	0.15			
277	12	Tile	1	0	0				
292	13	Tile	1	1	1	2.05	1.33	174.96	13155.00
292	13	Tile	1	1	1	1.48			
292	13	Tile	1	1	1	1.50			
292	13	Tile	1	1	1	1.25			
292	13	Tile	1	1	1	1.31			
292	13	Tile	1	1	1	1.23			
293	13	Tile	1	1	1	0.51			
298	14	Tile	1	1	1	0.63	0.68	51.00	7500.00
298	14	Tile	1	1	1	0.73			
310	15	Tile	1	1	1	2.31	1.83	325.23	17766.00
310	15	Tile	1	1	1	3.08			
311	15	Tile	1	1	1	1.61			
311	15	Tile	1	1	1	1.69			
311	15	Tile	1	1	1	1.95			
311	15	Tile	1	1	1	1.44			
312	15	Tile	1	1	1	0.74			
315	16	Tile	1	1	1	0.84	1.05	70.96	6742.00
315	16	Tile	1	1	1	1.31			
315	16	Tile	1	1	1	1.62			
315	16	Tile	1	1	1	0.44			
318	17	Tile	1	1	1	1.61	1.61	203.09	12614.00
322	18	Tile	1	1	1	1.60	1.60	107.30	6706.00
326	19	Tile	1	1	1	1.37	2.14	279.35	13074.00
326	19	Tile	1	1	1	0.85			
326	19	Tile	1	1	1	4.19			
360	20	Tile	1	1	1	0.33	0.49	63.61	13081.00
362	20	Tile	1	1	1	0.58			
363	20	Tile	1	1	1	0.55			
17.40	1	Surface	2	1	1	0.45	0.45	66.92	14870.10
32.56	2	Surface	2	1	1	0.50	0.50	69.50	13900.30

Appendix 208. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
48.00	3	Surface	2	0	0		0.50	33.30	6659.20
50.00	4	Surface	2	0	0		0.50	83.56	16712.70
276	5	Surface	2	1	1	0.14	0.14	1.31	937.50
291	6	Surface	2	1	1	1.02			
291	8	Surface	2	1	1	0.31	2.42	321.01	13253.80
292	6	Surface	2	0	0				
292	6	Surface	2	1	1	2.68			
292	6	Surface	2	1	1	3.66			
292	6	Surface	2	1	1	4.44			
297	7	Surface	2	0	0		2.42	87.69	3620.50
310	8	Surface	2	0	0		5.29	306.05	5786.40
310	8	Surface	2	1	1	5.52			
311	8	Surface	2	1	1	5.17			
311	8	Surface	2	1	1	4.74			
311	8	Surface	2	1	1	5.73			
312	9	Surface	2	0	0		5.29	58.13	1099.10
315	10	Surface	2	1	1	3.03	3.69	41.69	1131.40
315	10	Surface	2	1	1	4.34			
318	11	Surface	2	1	1	4.43	4.43	158.96	3588.20
322	12	Surface	2	1	1	1.25	3.10	205.10	6626.90
322	12	Surface	2	1	1	4.94			
326	13	Surface	2	1	1	2.00	1.63	132.53	8113.90
326	13	Surface	2	1	1	1.69			
326	13	Surface	2	1	1	1.21			
363	14	Surface	2	1	1	3.67	3.67	336.93	9180.70
17.35	1	Tile	2	0	0		0.78	4.41	565.00
32.56	2	Tile	2	1	1	0.78	0.78	8.59	1101.00
73	3	Tile	2	1	1	0.05	0.05	1.08	2169.00
84	4	Tile	2	1	1	0.05	0.06	5.27	8327.00
85	4	Tile	2	1	1	0.05			
85	4	Tile	2	1	1	0.09			
95	5	Tile	2	0	0		0.09	1.89	2095.00
98	6	Tile	2	1	1	0.09	0.09	4.41	4896.00
114	7	Tile	2	0	0		0.09	0.14	156.00
137	8	Tile	2	0	0		0.09	0.07	74.00
154	9	Tile	2	1	1	7.63	7.63	57.91	759.00
193	10	Tile	2	1	1	1.00	10.00	30.50	305.00
267	11	Tile	2	1	1	0.60	0.76	17.39	2298.00
267	11	Tile	2	1	1	1.11			
267	11	Tile	2	1	0				

Appendix 208. Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for ridge tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
267	11	Tile	2	1	1	0.56			
278	12	Tile	2	1	1	1.79	1.43	86.88	6084.00
278	12	Tile	2	1	1	2.14			
278	12	Tile	2	1	1	1.77			
277	12	Tile	2	1	1	1.21			
277	12	Tile	2	1	1	0.23			
292	13	Tile	2	1	1	1.78	1.89	217.49	11490.00
292	13	Tile	2	1	1	1.22			
292	13	Tile	2	1	1	3.38			
292	13	Tile	2	1	1	1.55			
292	13	Tile	2	1	1	2.14			
292	13	Tile	2	1	1	2.08			
293	13	Tile	2	1	1	1.10			
298	14	Tile	2	1	1	0.84	1.52	124.18	8170.00
298	14	Tile	2	1	1	2.20			
310	15	Tile	2	1	1	2.23	2.70	277.02	10271.00
310	15	Tile	2	1	1	3.31			
311	15	Tile	2	1	1	2.13			
311	15	Tile	2	1	1	4.94			
311	15	Tile	2	1	1	3.51			
311	15	Tile	2	1	1	1.38			
312	15	Tile	2	1	1	1.38			
315	16	Tile	2	1	1	1.67	2.32	104.66	4516.00
315	16	Tile	2	1	1	2.87			
315	16	Tile	2	1	1	2.71			
315	16	Tile	2	1	1	2.02			
318	17	Tile	2	1	1	3.92	3.92	312.58	7974.00
322	18	Tile	2	1	1	1.27	1.27	62.05	4886.00
326	19	Tile	2	1	1	2.13	2.54	211.16	8299.00
326	19	Tile	2	1	1	3.33			
326	19	Tile	2	1	1	2.17			
360	20	Tile	2	1	1	3.31	1.75	143.08	8176.00
362	20	Tile	2	1	1	0.50			
363	20	Tile	2	1	1	1.44			

Appendix 21B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
17.40	1	Surface	1	1	1	0.16	0.16	7.55	4719.60
32.56	2	Surface	1	1	1	1.25	1.25	40.00	3200.30
48.00	3	Surface	1	0	0		0.00	0.00	0.00
50.00	4	Surface	1	0	0		1.25	95.36	7629.00
278.00	5	Surface	1	0	0		0.00	0.00	0.00
291.96	6	Surface	1	0	0	1.07	1.16	3.00	258.60
292.06	6	Surface	1	1	0				
292.08	6	Surface	1	1	0				
292.10	6	Surface	1	1	1	1.25			
297.00	7	Surface	1	0	0		0.00	0.00	0.00
310.46	8	Surface	1	0	0		1.16	6.37	549.50
310.56	8	Surface	1	1	0				
310.65	8	Surface	1	1	0				
310.83	8	Surface	1	1	0				
312.00	9	Surface	1	0	0		0.00	0.00	0.00
315.20	10	Surface	1	0	0		0.00	0.00	0.00
315.25	10	Surface	1	1	0				
318.19	11	Surface	1	0	0		1.16	7.88	678.90
321.57	12	Surface	1	0	0		1.16	2.63	226.30
321.61	12	Surface	1	0	0				
325.61	13	Surface	1	0	0		3.13	55.65	1777.90
325.65	13	Surface	1	0	0				
325.81	13	Surface	1	1	1	3.13			
363.38	14	Surface	1	1	1	0.73	0.73	11.09	1519.30
17.35	1	Tile	1	0	0		0.45	2.98	662.00
32.56	2	Tile	1	1	1	0.45	0.45	7.69	1709.00
72.66	3	Tile	1	1	1	0.18	0.18	3.54	1967.00
84.39	4	Tile	1	1	1	0.16	0.35	41.66	11904.00
84.66	4	Tile	1	1	1	0.09			
85.42	4	Tile	1	1	1	0.80			
94.88	5	Tile	1	0	0		0.35	7.65	2187.00
97.92	6	Tile	1	1	1	0.05	0.05	2.91	5829.00
114.31	7	Tile	1	0	0		0.05	0.05	104.00
136.85	8	Tile	1	0	0		0.05	0.04	74.00
154.27	9	Tile	1	1	1	0.05	0.05	0.43	855.00
192.96	10	Tile	1	1	1	5.12	5.12	3.02	59.00
267.13	11	Tile	1	0	0		0.00	0.00	0.00
276.41	12	Tile	1	1	1	0.95	0.62	2.44	396.00
276.43	12	Tile	1	1	1	0.60			
276.44	12	Tile	1	1	1	0.61			

Appendix 21B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
278.60	12	Tile	1	1	1	0.30			
291.92	13	Tile	1	1	1	1.51	0.90	97.66	10903.00
291.96	13	Tile	1	1	1	0.73			
292.06	13	Tile	1	1	1	0.96			
292.10	13	Tile	1	1	1	1.25			
292.15	13	Tile	1	1	1	1.07			
292.38	13	Tile	1	1	1	0.54			
292.67	13	Tile	1	1	1	0.21			
297.74	14	Tile	1	1	1	0.53	0.41	25.38	6267.00
297.77	14	Tile	1	1	1	0.28			
310.38	15	Tile	1	1	1	3.23	2.26	313.43	13888.00
310.44	15	Tile	1	1	1	3.36			
310.56	15	Tile	1	1	1	2.19			
310.65	15	Tile	1	1	1	1.51			
310.83	15	Tile	1	1	1	3.51			
311.33	15	Tile	1	1	1	1.36			
312.40	15	Tile	1	1	1	0.64			
315.20	16	Tile	1	1	1	1.28	1.91	159.30	8362.00
315.24	16	Tile	1	1	1	2.08			
315.28	16	Tile	1	1	1	2.14			
315.46	16	Tile	1	1	1	2.12			
318.19	17	Tile	1	1	1	4.05	4.05	697.33	17218.00
321.58	18	Tile	1	1	1	1.10	1.10	111.72	10158.00
325.63	19	Tile	1	1	1	3.73	2.86	552.98	19335.00
325.83	19	Tile	1	1	1	2.13			
326.40	19	Tile	1	1	1	2.72			
359.68	20	Tile	1	1	1	0.45	0.68	127.88	18810.00
362.46	20	Tile	1	1	1	0.29			
363.38	20	Tile	1	1	1	1.30			
17.40	1	Surface	2	1	1	0.78	0.78	75.64	9697.90
32.56	2	Surface	2	1	1	0.57	0.57	27.27	4784.30
48.00	3	Surface	2	0	0		0.57	26.72	4687.30
50.00	4	Surface	2	0	0		0.57	51.41	9019.00
276.00	5	Surface	2	0	0		0.57	3.13	549.50
291.96	6	Surface	2	0	0		3.35	94.12	2812.40
292.06	6	Surface	2	1	1	1.07			
292.08	6	Surface	2	1	1	3.45			
292.10	6	Surface	2	1	1	5.52			
297.00	7	Surface	2	0	0		3.35	17.31	517.20
310.46	8	Surface	2	0	0		0.00	0.00	0.00

Appendix 21B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1988

- 3

Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
310.56	8	Surface	2	1	0				
310.65	8	Surface	2	1	0				
310.83	8	Surface	2	1	0				
312.00	9	Surface	2	0	0		0.00	0.00	0.00
315.20	10	Surface	2	1	1	4.26	4.76	353.53	7435.00
315.25	10	Surface	2	1	1	5.25			
318.19	11	Surface	2	1	1	2.29	2.29	71.81	3135.70
321.57	12	Surface	2	1	1	2.63	2.44	77.14	3168.00
321.61	12	Surface	2	1	1	2.24			
325.61	13	Surface	2	1	1	1.16	2.41	158.37	6562.20
325.65	13	Surface	2	1	1	4.05			
325.81	13	Surface	2	1	1	2.03			
363.38	14	Surface	2	1	1	3.00			
363.38	14	Surface	2	1	1	0.67	1.84	66.44	3620.50
17.35	1	Tile	2	0	0		0.39	1.35	347.00
32.56	2	Tile	2	1	1	0.39	0.39	1.40	359.00
72.66	3	Tile	2	1	1	0.36	0.36	2.81	781.00
84.39	4	Tile	2	1	1	0.27	0.50	40.23	8099.00
84.66	4	Tile	2	1	1	0.51			
85.42	4	Tile	2	1	1	0.71			
94.88	5	Tile	2	0	0		0.50	7.52	1515.00
97.92	6	Tile	2	1	1	0.05	0.05	1.74	3477.00
114.31	7	Tile	2	0	0		0.05	0.03	65.00
136.85	8	Tile	2	0	0		0.05	0.04	74.00
154.27	9	Tile	2	1	1	0.05	0.05	0.23	464.00
192.96	10	Tile	2	0	0		0.05	0.02	33.00
267.13	11	Tile	2	0	0		0.00	0.00	0.00
276.41	12	Tile	2	1	1	2.26	1.57	2.26	144.00
276.43	12	Tile	2	1	1	1.43			
276.44	12	Tile	2	1	1	1.06			
276.60	12	Tile	2	1	1	1.52			
291.92	13	Tile	2	0	0		0.82	68.69	8411.00
291.96	13	Tile	2	1	1	0.73			
292.06	13	Tile	2	1	1	1.70			
292.10	13	Tile	2	1	1	0.83			
292.15	13	Tile	2	1	1	0.83			
292.38	13	Tile	2	1	1	0.57			
292.67	13	Tile	2	1	1	0.24			
297.74	14	Tile	2	1	1	0.87	0.88	56.90	6466.00
297.77	14	Tile	2	1	1	0.89			

Appendix 21B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1988

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Julian Time/88	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
310.38	15	Tile	2	1	1	2.23	3.81	405.47	10634.00
310.44	15	Tile	2	1	1	2.50			
310.56	15	Tile	2	1	1	3.75			
310.65	15	Tile	2	1	1	3.73			
310.83	15	Tile	2	1	1	7.14			
311.33	15	Tile	2	1	1	4.15			
312.40	15	Tile	2	1	1	3.19			
315.20	16	Tile	2	1	1	2.10	3.36	205.06	6103.00
315.24	16	Tile	2	1	1	3.03			
315.28	16	Tile	2	1	1	4.37			
315.46	16	Tile	2	1	1	3.94			
318.19	17	Tile	2	1	1	4.94	4.94	423.56	8574.00
321.58	18	Tile	2	1	1	2.23	2.23	122.36	5487.00
325.63	19	Tile	2	1	1	2.47	2.75	232.84	8460.00
325.83	19	Tile	2	1	1	1.67			
326.40	19	Tile	2	1	1	4.12			
359.68	20	Tile	2	1	1	4.79	2.31	234.80	10183.00
362.46	20	Tile	2	1	1	0.45			
363.38	20	Tile	2	1	1	1.68			

Appendix 22B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
8	1	Surface	1	1	1	27.50	27.50	11947.82	43446.60
26	2	Surface	1	1	1	2.89	2.89	0.00	0.00
83	3	Surface	1	1	1	3.86	3.86	170.57	4419.00
108	4	Surface	1	0	0	0.00	0.00	0.00	0.00
146	5	Surface	1	1	1	693.00	545.56	10034.97	1839.40
146	5	Surface	1	1	1	452.00			
146	5	Surface	1	1	1	491.67			
146	5	Surface	1	0	0	0.00			
151	6	Surface	1	1	1	305.88	290.92	35303.77	12135.30
151	6	Surface	1	1	1	485.71			
151	6	Surface	1	1	1	151.00			
152	6	Surface	1	1	1	322.00			
153	6	Surface	1	1	1	190.00			
155	7	Surface	1	1	1	143.00	135.77	3041.44	2240.20
155	7	Surface	1	1	1	144.17			
155	7	Surface	1	1	1	120.13			
168	8	Surface	1	0	0	0.00	135.77	3265.32	2405.10
169	8	Surface	1	0	0	0.00			
171	9	Surface	1	1	1	46.04	46.57	1648.26	3539.70
171	9	Surface	1	1	1	47.09			
201	10	Surface	1	0	0	0.00	10.29	498.29	4842.50
201	10	Surface	1	1	1	10.29			
320	11	Surface	1	1	1	3.67	3.53	168.88	4790.80
320	11	Surface	1	1	1	3.38			
8	1	Tile	1	1	1	2.27	2.27	90.50	3987.00
26	2	Tile	1	1	1	2.68	2.68	38.32	1430.00
87	3	Tile	1	1	1	1.22	1.22	185.61	15214.00
93	4	Tile	1	1	1	0.48	0.48	82.57	17203.00
108	5	Tile	1	0	0	0.00	0.48	82.55	17197.00
145	6	Tile	1	1	1	180.60	191.12	28859.37	15100.00
145	6	Tile	1	1	1	72.00			
146	6	Tile	1	1	1	245.73			
146	6	Tile	1	1	1	96.40			
146	6	Tile	1	1	1	365.00			
146	6	Tile	1	1	1	187.00			
147	6	Tile	1	0	0	0.00			
151	7	Tile	1	1	1	131.00	86.15	17592.44	20421.00
151	7	Tile	1	1	1	144.00			
151	7	Tile	1	1	1	155.00			
152	7	Tile	1	1	1	49.00			

Appendix 22B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
152	7	Tile	1	1	1	66.70			
153	7	Tile	1	1	1	16.83			
153	7	Tile	1	1	1	91.28			
153	7	Tile	1	1	1	35.38			
154	8	Tile	1	0	0	0.00	76.50	11141.46	14564.00
155	8	Tile	1	1	1	82.30			
155	8	Tile	1	1	1	70.70			
167	9	Tile	1	1	1	25.47	19.50	2025.86	10389.00
167	9	Tile	1	1	1	12.62			
168	9	Tile	1	0	0	0.00			
169	9	Tile	1	1	1	20.41			
171	10	Tile	1	1	1	41.25	36.51	2353.22	6446.00
171	10	Tile	1	1	1	47.07			
171	10	Tile	1	1	1	21.20			
201	11	Tile	1	1	1	6.17	6.99	849.77	12157.00
201	11	Tile	1	1	1	3.27			
201	11	Tile	1	0	0	0.00			
201	11	Tile	1	1	1	13.54			
202	11	Tile	1	1	1	4.98			
320	12	Tile	1	1	1	1.37	1.52	184.91	12165.00
320	12	Tile	1	1	1	1.67			
8	1	Surface	2	1	1	2.89	2.89	1667.60	57702.50
26	2	Surface	2	1	1	2.89	2.89	83.43	2886.70
93	3	Surface	2	1	1	1.25	1.25	58.87	4709.90
108	4	Surface	2	0	0	0.00	1.25	19.36	1548.40
146	5	Surface	2	1	1	738.00	637.49	11808.13	1852.30
146	5	Surface	2	1	1	801.00			
146	5	Surface	2	1	1	283.00			
146	5	Surface	2	1	1	727.94			
151	6	Surface	2	1	1	370.59	289.43	36161.92	12494.10
151	6	Surface	2	1	1	388.57			
151	6	Surface	2	1	1	229.00			
152	6	Surface	2	1	1	309.00			
153	6	Surface	2	1	1	150.00			
155	7	Surface	2	1	1	88.08	114.73	3026.26	2637.80
155	7	Surface	2	1	1	168.71			
155	7	Surface	2	1	1	87.39			
168	8	Surface	2	0	0	0.00	114.73	2759.29	2405.10
169	8	Surface	2	0	0	0.00			
171	9	Surface	2	0	0	0.00	114.73	4060.98	3539.70

Appendix 22B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
171	9	Surface	2	0	0	0.00			
201	10	Surface	2	1	1	16.67	12.06	584.01	4842.50
201	10	Surface	2	1	1	7.45			
320	11	Surface	2	1	1	1.18	1.16	46.46	4005.20
320	11	Surface	2	1	1	1.14			
8	1	Tile	2	1	1	1.31	1.31	26.59	2030.00
26	2	Tile	2	1	1	1.05	1.05	6.83	650.00
87	3	Tile	2	1	1	0.61	0.61	79.70	13065.00
93	4	Tile	2	1	1	2.00	2.00	339.92	16996.00
108	5	Tile	2	0	0	0.00	2.00	491.76	24588.00
145	6	Tile	2	1	1	176.12	183.33	17995.67	9816.00
145	6	Tile	2	1	1	89.60			
146	6	Tile	2	1	1	207.26			
146	6	Tile	2	1	1	207.00			
146	6	Tile	2	1	1	271.00			
146	6	Tile	2	1	1	149.00			
147	6	Tile	2	0	0	0.00			
151	7	Tile	2	1	1	161.00	87.26	11582.23	13274.00
151	7	Tile	2	1	1	148.00			
151	7	Tile	2	1	1	133.00			
152	7	Tile	2	1	1	61.30			
152	7	Tile	2	1	1	62.60			
153	7	Tile	2	1	1	27.69			
153	7	Tile	2	1	1	75.73			
153	7	Tile	2	1	1	28.72			
154	8	Tile	2	1	1	40.28	48.49	2459.90	5073.00
155	8	Tile	2	1	1	56.70			
155	8	Tile	2	0	0	0.00			
167	9	Tile	2	1	1	36.33	21.57	921.69	4273.00
167	9	Tile	2	1	1	14.77			
168	9	Tile	2	0	0	0.00			
169	9	Tile	2	1	1	13.61			
171	10	Tile	2	1	1	29.74	35.68	4744.81	13297.00
171	10	Tile	2	1	1	44.11			
171	10	Tile	2	1	1	33.20			
201	11	Tile	2	1	1	8.12	7.99	1183.06	14816.00
201	11	Tile	2	1	1	7.22			
201	11	Tile	2	0	0	0.00			
201	11	Tile	2	1	1	9.68			
202	11	Tile	2	1	1	6.92			

Appendix 22B.

Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1989

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
320	12	Tile	2	1	1	1.98	1.48	64.75	4390.00
320	12	Tile	2	1	1	0.97			

Appendix 23B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for ridge tillage, 1989

- 1

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
8	1	Surface	1	1	0	0.00	3.83	121.33	3168.00
26	2	Surface	1	1	1	3.83	3.83	45.81	1196.10
93	3	Surface	1	1	1	3.93	3.93	195.14	4965.30
108	4	Surface	1	0	0	0.00	3.93	42.94	1092.60
146	5	Surface	1	1	1	527.00	699.33	29208.32	4176.60
146	5	Surface	1	1	1	587.00			
146	5	Surface	1	1	1	683.33			
146	5	Surface	1	1	1	1000.00			
151	6	Surface	1	1	1	535.29	322.03	50467.90	15671.80
151	6	Surface	1	1	1	422.86			
151	6	Surface	1	1	1	202.00			
152	6	Surface	1	1	1	286.00			
153	6	Surface	1	1	1	164.00			
155	7	Surface	1	1	1	38.54	89.99	2149.77	2388.90
155	7	Surface	1	1	1	111.96			
155	7	Surface	1	1	1	119.47			
167	8	Surface	1	0	0	0.00	89.99	1524.34	1693.90
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
169	8	Surface	1	0	0	0.00			
171	9	Surface	1	0	0	0.00	22.27	1889.03	8482.40
171	9	Surface	1	1	1	23.14			
171	9	Surface	1	1	1	21.40			
201	10	Surface	1	0	0	0.00	10.86	573.64	5282.10
201	11	Surface	1	1	1	10.86			
320	11	Surface	1	1	1	1.29	1.19	53.89	4528.90
320	11	Surface	1	1	1	1.09			
8	1	Tile	1	1	1	3.45	3.45	167.91	4867.00
26	2	Tile	1	1	1	1.25	1.25	37.49	2999.00
87	3	Tile	1	1	1	1.33	1.33	210.83	15852.00
93	4	Tile	1	1	1	1.35	1.35	280.04	20744.00
108	5	Tile	1	0	0	0.00	1.35	237.40	17585.00

Appendix 23B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for ridge tillage, 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
145	6	Tile	1	1	1	137.31			
145	6	Tile	1	1	1	169.23			
146	6	Tile	1	1	1	291.13			
146	6	Tile	1	1	1	29.60			
146	6	Tile	1	1	1	188.00			
146	6	Tile	1	1	1	131.00			
147	6	Tile	1	0	1	45.70			
151	7	Tile	1	1	1	184.00	86.64	16636.47	19201.00
151	7	Tile	1	1	1	90.10			
151	7	Tile	1	1	1	103.00			
152	7	Tile	1	1	1	63.20			
152	7	Tile	1	1	1	77.00			
153	7	Tile	1	1	1	33.29			
153	7	Tile	1	1	1	89.23			
153	7	Tile	1	1	1	53.33			
154	8	Tile	1	0	0	0.00	41.50	4650.91	11207.00
155	8	Tile	1	1	1	52.60			
155	8	Tile	1	1	1	30.40			
167	9	Tile	1	1	1	17.85	16.69	1680.02	10066.00
167	9	Tile	1	1	1	14.90			
168	9	Tile	1	0	0	0.00			
169	9	Tile	1	1	1	17.32			
171	10	Tile	1	1	1	42.25	19.38	2062.65	10645.00
171	10	Tile	1	1	1	1.58			
171	10	Tile	1	1	1	14.30			
201	11	Tile	1	1	1	8.12	7.72	941.37	12190.00
201	11	Tile	1	1	1	4.16			
201	11	Tile	1	0	0	0.00			
201	11	Tile	1	1	1	11.07			
202	11	Tile	1	1	1	7.54			
320	12	Tile	1	1	1	0.71	0.54	53.02	9911.00
320	12	Tile	1	1	1	0.36			
8	1	Surface	2	1	0	0.00	3.68	328.45	8925.30
26	2	Surface	2	1	1	3.68	3.68	95.17	2586.10
93	3	Surface	2	1	1	3.08	3.08	152.93	4965.30
108	4	Surface	2	0	0	0.00	3.08	44.11	1432.10
146	5	Surface	2	1	1	647.00	742.03	13408.48	1807.00
146	5	Surface	2	1	1	827.00			
146	5	Surface	2	1	1	700.00			
146	5	Surface	2	1	1	794.12			

Appendix 23B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for ridge tillage, 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	6	Surface	2	1	1	305.88	233.42	42452.36	18186.80
151	6	Surface	2	1	1	417.14			
151	6	Surface	2	1	1	97.10			
152	6	Surface	2	1	1	196.00			
153	6	Surface	2	1	1	151.00			
155	7	Surface	2	1	1	80.37	78.86	2533.82	3213.20
155	7	Surface	2	1	1	113.50			
155	7	Surface	2	1	1	42.70			
167	8	Surface	2	1	1	63.98	57.00	965.44	1693.90
167	8	Surface	2	1	1	56.19			
167	8	Surface	2	1	1	62.86			
167	8	Surface	2	1	1	48.57			
167	8	Surface	2	1	1	62.37			
167	8	Surface	2	1	1	61.88			
167	8	Surface	2	1	1	73.42			
167	8	Surface	2	1	1	44.05			
167	8	Surface	2	1	1	46.15			
168	8	Surface	2	1	1	50.48			
168	8	Surface	2	0	0	0.00			
169	8	Surface	2	0	0	0.00			
171	9	Surface	2	1	0	0.00	1.65	139.96	8482.40
171	9	Surface	2	1	1	1.05			
171	9	Surface	2	0	0	0.00			
201	10	Surface	2	0	0	0.00	4.89	258.29	5282.10
201	10	Surface	2	1	1	4.89			
320	11	Surface	2	1	0	0.00	0.52	13.63	2621.70
320	11	Surface	2	1	1	0.52			
8	1	Tile	2	1	1	1.31	1.31	29.59	2259.00
26	2	Tile	2	1	1	3.98	3.98	44.54	1119.00
87	3	Tile	2	1	1	0.05	0.05	6.47	12936.00
93	4	Tile	2	1	1	2.00	2.00	351.76	17588.00
108	5	Tile	2	0	0	0.00	2.00	241.28	12064.00
145	6	Tile	2	1	1	105.97	133.78	9379.62	7011.00
145	6	Tile	2	1	1	99.20			
146	6	Tile	2	1	1	193.16			
146	6	Tile	2	1	1	212.00			
146	6	Tile	2	1	1	256.00			
146	6	Tile	2	1	1	68.60			
147	6	Tile	2	1	1	1.56			
151	7	Tile	2	1	1	146.00	60.93	5250.01	8617.00

Appendix 23B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for ridge tillage, 1989

- 4

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	7	Tile	2	1	1	141.00			
151	7	Tile	2	1	1	69.10			
152	7	Tile	2	1	1	19.40			
152	7	Tile	2	1	1	47.80			
153	7	Tile	2	1	1	6.15			
153	7	Tile	2	1	1	46.68			
153	7	Tile	2	1	1	11.28			
154	8	Tile	2	0	0	0.00	43.23	2466.27	5705.00
155	8	Tile	2	1	1	68.40			
155	8	Tile	2	1	1	18.06			
167	9	Tile	2	1	1	27.97	20.17	1202.13	5959.00
167	9	Tile	2	1	1	9.66			
168	9	Tile	2	0	0	0.00			
169	9	Tile	2	1	1	22.89			
171	10	Tile	2	1	1	23.08	31.13	6502.98	20892.00
171	10	Tile	2	1	1	37.60			
171	10	Tile	2	1	1	32.70			
201	11	Tile	2	1	1	9.09	8.09	952.24	11767.00
201	11	Tile	2	1	1	8.01			
201	11	Tile	2	0	0	0.00			
201	11	Tile	2	1	1	9.09			
202	11	Tile	2	1	1	6.18			
320	12	Tile	2	1	1	0.35	0.30	36.46	12154.00
320	12	Tile	2	1	1	0.25			

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989 - 1

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
8	1	Surface	1	0	0	0.00	0.00	0.00	0.00
26	2	Surface	1	0	0	0.00	0.00	0.00	0.00
93	3	Surface	1	0	0	0.00	0.00	0.00	0.00
108	4	Surface	1	0	0	0.00	0.00	0.00	0.00
146	5	Surface	1	1	1	319.00	366.00	2851.51	779.10
146	5	Surface	1	1	1	437.00			
146	5	Surface	1	1	1	342.00			
146	5	Surface	1	0	0	0.00			
151	6	Surface	1	1	1	235.29	188.34	20231.91	10742.00
151	6	Surface	1	1	1	291.43			
151	6	Surface	1	1	1	115.00			
152	6	Surface	1	1	1	176.00			
153	6	Surface	1	1	1	124.00			
155	7	Surface	1	1	1	107.35	98.05	2142.61	2185.30
155	7	Surface	1	1	1	84.36			
155	7	Surface	1	1	1	102.43			
167	8	Surface	1	0	0	0.00	98.05	2459.50	2508.50
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
167	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
168	8	Surface	1	0	0	0.00			
169	8	Surface	1	0	0	0.00			
171	9	Surface	1	0	0	0.00	32.64	1441.32	4415.80
171	9	Surface	1	1	1	45.28			
171	9	Surface	1	0	0	0.00			
171	9	Surface	1	1	1	20.00			
201	10	Surface	1	0	0	0.00	47.43	1907.35	4021.40
201	10	Surface	1	1	1	47.43			
320	11	Surface	1	0	0	0.00	47.43	887.75	1871.70
320	11	Surface	1	0	0	0.00			
8	1	Tile	1	1	1	1.65	1.65	95.78	5805.00
26	2	Tile	1	1	1	2.05	2.05	42.93	2094.00
87	3	Tile	1	1	1	2.35	2.35	444.34	18908.00
93	4	Tile	1	1	1	2.77	2.77	676.43	24420.00
108	5	Tile	1	0	0	0.00	2.77	795.13	28705.00

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989 - 2

Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
145	6	Tile	1	1	1	273.13	200.55	21851.75	10896.00
145	6	Tile	1	1	1	128.00			
146	6	Tile	1	1	1	143.16			
146	6	Tile	1	1	1	164.00			
146	6	Tile	1	1	1	232.00			
146	6	Tile	1	1	1	263.00			
147	6	Tile	1	0	0	0.00			
151	7	Tile	1	1	1	51.50	114.47	29611.92	25869.00
151	7	Tile	1	1	1	219.00			
151	7	Tile	1	1	1	152.00			
152	7	Tile	1	1	1	105.00			
152	7	Tile	1	1	1	81.30			
153	7	Tile	1	1	1	24.52			
153	7	Tile	1	1	1	124.48			
153	7	Tile	1	1	1	157.95			
154	8	Tile	1	1	1	78.91	55.00	6538.95	11889.00
155	8	Tile	1	1	1	110.00			
155	8	Tile	1	0	0	0.00			
167	9	Tile	1	1	1	519.83	183.32	42269.16	23058.00
167	9	Tile	1	1	1	13.42			
168	9	Tile	1	0	0	0.00			
169	9	Tile	1	1	1	16.70			
171	10	Tile	1	1	1	59.23	48.57	17394.11	35810.00
171	10	Tile	1	1	1	45.59			
171	10	Tile	1	1	1	40.90			
201	11	Tile	1	1	1	21.16	25.89	4656.06	17984.00
201	11	Tile	1	1	1	9.80			
201	11	Tile	1	0	0	0.00			
201	11	Tile	1	1	1	64.03			
202	11	Tile	1	1	1	8.57			
320	12	Tile	1	0	0	0.00	25.89	143.69	555.00
320	12	Tile	1	0	0	0.00			
8	1	Surface	2	1	1	1.19	1.19	451.62	37951.10
26	2	Surface	2	0	0	0.00	0.00	0.00	0.00
93	3	Surface	2	1	1	1.06	1.06	70.04	6607.50
108	4	Surface	2	0	0	0.00	1.06	9.66	911.60
146	5	Surface	2	1	1	368.00	512.06	23687.38	4625.90
146	5	Surface	2	1	1	600.00			
146	5	Surface	2	1	1	492.00			
146	5	Surface	2	1	1	588.24			

Appendix 24B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for conventional tillage, 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	6	Surface	2	1	1	317.65	226.24	36019.63	15920.70
151	6	Surface	2	1	1	258.57			
151	6	Surface	2	1	1	126.00			
152	6	Surface	2	1	1	242.00			
153	6	Surface	2	1	1	187.00			
155	7	Surface	2	1	1	71.02	79.88	2912.62	3646.40
155	7	Surface	2	1	1	88.96			
155	7	Surface	2	1	1	79.65			
167	8	Surface	2	1	1	92.55	59.80	1500.17	2508.50
167	8	Surface	2	1	1	73.79			
167	8	Surface	2	1	1	80.85			
167	8	Surface	2	1	1	53.72			
167	8	Surface	2	1	1	46.81			
167	8	Surface	2	1	1	36.89			
167	8	Surface	2	1	1	59.57			
168	8	Surface	2	1	1	50.00			
168	8	Surface	2	0	0	44.05			
168	8	Surface	2	1	1	0.00			
169	8	Surface	2	0	0	0.00			
171	9	Surface	2	1	1	81.50	106.18	4688.70	4415.80
171	9	Surface	2	1	1	16.78			
171	9	Surface	2	1	1	220.26			
171	9	Surface	2	0	0	0.00			
201	10	Surface	2	0	0	0.00	27.23	0.00	0.00
201	10	Surface	2	1	1	27.23			
320	11	Surface	2	0	0	0.00	0.00	0.00	0.00
320	11	Surface	2	0	0	0.00			
8	1	Tile	2	1	1	3.13	3.13	105.45	3369.00
26	2	Tile	2	1	1	2.34	2.34	41.30	1765.00
87	3	Tile	2	1	1	1.33	1.33	105.88	7961.00
93	4	Tile	2	1	1	3.14	3.14	624.39	19885.00
108	5	Tile	2	0	0	0.00	3.14	343.83	10950.00
145	6	Tile	2	1	0	0.00	120.27	6309.26	5246.00
145	6	Tile	2	1	1	81.80			
146	6	Tile	2	1	1	47.54			
146	6	Tile	2	1	1	95.20			
146	6	Tile	2	1	1	197.00			
146	6	Tile	2	1	1	180.00			
147	6	Tile	2	0	0	0.00			
151	7	Tile	2	1	1	29.00	121.36	13921.64	11471.00

Appendix 24B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1989

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Julian Time/89	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
151	7	Tile	2	1	1	74.70			
151	7	Tile	2	1	1	145.00			
152	7	Tile	2	1	1	175.00			
152	7	Tile	2	1	1	92.60			
153	7	Tile	2	1	1	55.53			
153	7	Tile	2	1	1	99.59			
153	7	Tile	2	1	1	299.49			
154	8	Tile	2	0	0	0.00	68.02	4523.33	6650.00
155	8	Tile	2	1	1	65.90			
155	8	Tile	2	1	1	70.14			
167	9	Tile	2	1	1	425.89	188.76	16445.06	8712.00
167	9	Tile	2	1	1	49.93			
168	9	Tile	2	0	0	0.00			
169	9	Tile	2	1	1	90.47			
171	10	Tile	2	1	1	55.00	50.63	5545.36	10952.00
171	10	Tile	2	1	1	67.10			
171	10	Tile	2	1	1	29.80			
201	11	Tile	2	1	1	17.59	18.63	2622.17	14075.00
201	11	Tile	2	1	1	16.83			
201	11	Tile	2	0	0	0.00			
201	11	Tile	2	1	1	22.13			
202	11	Tile	2	1	1	17.97			
320	12	Tile	2	1	1	3.89	3.89	89.98	2313.00
320	12	Tile	2	0	0	0.00			

Appendix 25B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990 - 1

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
4	1	Surface	1	1	0	2	5.02	415.11	8269
4	1	Surface	1	1	0	8			
10	2	Surface	1	1	0	8	7.89	793.73	10060
18	3	Surface	1	0	0	0	0.00	0.00	0
38	4	Surface	1	0	0	0	0.00	0.00	0
39	5	Surface	1	0	0	8	5.98	513.44	8586
39	5	Surface	1	1	0	6			
39	5	Surface	1	1	0	6			
53	6	Surface	1	1	0	1	0.80	136.91	17114
53	6	Surface	1	1	1	1			
58	7	Surface	1	0	0	0	0.00	0.00	0
101	8	Surface	1	1	1	2.00	2.00	80.82	4041
134	9	Surface	1	0	0	6	5.98	274.12	4584
136	10	Surface	1	1	0	6	5.98	330.18	5521
137	10	Surface	1	1	0	6			
137	11	Surface	1	1	0	6	5.98	180.75	3023
159	12	Surface	1	0	0	0	0.00	0.00	0
159	12	Surface	1	0	0	0			
195	13	Surface	1	1	0	0	0.00	0.00	0
225	14	Surface	1	1	0	0	0.00	0.00	0
231	15	Surface	1	0	0	0	0.00	0.00	0
250	16	Surface	1	1	1	6.71	8.89	617.19	6940
250	16	Surface	1	1	1	11.07			
250	17	Surface	1	1	1	12.82	12.82	913.96	7131
250	17	Surface	1	0	0	0			
258	18	Surface	1	1	1	2.32	3.88	293.70	7574
258	18	Surface	1	1	1	7.00			
258	18	Surface	1	1	1	2.32			
259	19	Surface	1	1	1	4.83	4.83	288.20	5964
262	20	Surface	1	1	1	1.74	3.22	178.05	5531
262	20	Surface	1	1	1	3.81			
262	20	Surface	1	1	1	4.11			
265	21	Surface	1	0	0	0	4.51	119.15	2641
265	2	Surface	1	1	1	4.51			
4	1	Tile	1	0	0	0	0.00	0.00	0
10	2	Tile	1	0	0	0			166
12	2	Tile	1	1	0	0	0.29	0.00	
18	3	Tile	1	1	0	0	0.36	46.16	12822
18	3	Tile	1	1	0	0			
24	4	Tile	1	1	0	0	0.29	19.67	6783

Appendix 25B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
32	5	Tile	1	1	0	0	0.29	25.36	8745
38	6	Tile	1	0	0	0	0.29	34.36	11849
38	6	Tile	1	1	1	0			
39	6	Tile	1	1	0	0			
39	6	Tile	1	0	0	0			
40	6	Tile	1	0	0	0			
45	7	Tile	1	0	0	0	0.29	7.16	2468
53	8	Tile	1	1	0	0	0.29	80.69	27825
53	8	Tile	1	1	0	0			
70	9	Tile	1	1	1	0	0.38	69.26	18227
71	9	Tile	1	1	1	0			
92	10	Tile	1	1	0	0	0.29	16.85	5811
101	11	Tile	1	1	0	0	0.29	48.76	16813
101	11	Tile	1	1	0	0			
111	12	Tile	1	1	0	0	0.29	13.98	4821
125	13	Tile	1	1	0	0	0.29	25.87	8919
134	14	Tile	1	1	0	0	0.29	37.34	12876
135	14	Tile	1	1	0	0			
136	15	Tile	1	1	0	0	0.33	52.83	15848
137	15	Tile	1	1	0	0			
137	15	Tile	1	1	1	0.33			
159	16	Tile	1	1	1	139.66	99.45	6267.22	6302
159	16	Tile	1	1	1	106.25			
159	16	Tile	1	1	1	52.44			
179	16	Tile	1	0	0	0		0.00	
195	17	Tile	1	1	1	18.02	13.38	185.40	1386
195	17	Tile	1	1	1	17.56			
196	17	Tile	1	1	1	4.55			
225	18	Tile	1	0	0	0.00	0.00	0.00	0
225	19	Tile	1	1	1	7.73	7.73	42.27	547
231	20	Tile	1	1	1	2.14	2.14	69.24	3231.00
250	21	Tile	1	0	0	0	5.45	972.26	17853
250	21	Tile	1	1	1	5.32			
250	21	Tile	1	1	1	8.72			
250	21	Tile	1	1	1	6.67			
250	21	Tile	1	1	1	5.23			
251	21	Tile	1	1	1	1.29			
258	22	Tile	1	1	1	3.49	3.67	323.15	8800
258	22	Tile	1	1	1	4.67			

Appendix 25B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
258	22	Tile	1	1	1	1.99			
258	22	Tile	1	1	1	4.55			
259	23	Tile	1	1	1	2.65	2.65	177.35	6695
262	24	Tile	1	1	1	3.15	3.32	182.94	5509
262	24	Tile	1	1	1	4.51			
262	24	Tile	1	1	1	3.19			
263	24	Tile	1	1	1	3.36			
263	24	Tile	1	1	1	2.40			
265	25	Tile	1	1	1	1.77	1.77	46.86	2643
4	1	Surface	2	1	0	2	2.06	292.03	14211
4	1	Surface	2	1	0	2			
10	2	Surface	2	1	0	7	6.93	411.08	5932
18	3	Surface	2	1	0	2	2.38	59.24	2489
38	4	Surface	2	1	0	3	3.36	105.03	3126
39	5	Surface	2	1	0	3	3.36	107.64	3204
39	5	Surface	2	0	0	3			
39	5	Surface	2	1	0	3			
53	6	Surface	2	1	0	0	0.48	85.98	17912
53	6	Surface	2	1	1	0.48			
58	7	Surface	2	0	0	0	0.00	0.00	0
101	8	Surface	2	1	1	1.20	1.20	35.26	2938
134	9	Surface	2	1	0	3	3.36	115.02	3423
136	10	Surface	2	1	0	3	3.36	143.59	4274
137	10	Surface	2	1	0	3			
137	11	Surface	2	1	0	3	3.36	57.24	1704
159	12	Surface	2	1	1	426.83	597.64	7901.64	1322.15
159	12	Surface	2	1	1	768.44			
195	13	Surface	2	1	0	0	0.00	0.00	0
225	14	Surface	2	1	0	0	0.00	0.00	0
231	15	Surface	2	1	1	0.15	0.15	6.30	4186.26
250	16	Surface	2	1	1	8.87	8.33	488.19	5864
250	16	Surface	2	1	1	7.79			
250	1	Surface	2	1	1	9.11	9.33	550.93	5908
250	17	Surface	2	1	1	9.54			
258	18	Surface	2	1	1	5.23	5.23	305.71	5841
258	18	Surface	2	1	1	5.30			
258	18	Surface	2	1	1	5.17			
259	19	Surface	2	1	1	4.70	4.70	319.08	6792
262	20	Surface	2	1	1	3.23	4.35	330.71	7610

Appendix 25B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for zero tillage, 1990 - 4

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
262	20	Surface	2	1	1	6.04			
262	20	Surface	2	1	1	3.77			
265	21	Surface	2	1	1	3.73	3.75	100.13	2673
265	21	Surface	2	1	1	3.76			
4	1	Tile	2	0	0	0	0.00	0.00	0
10	2	Tile	2	1	0	1	1.17	24.87	2126
12	2	Tile	2	1	0	1			
18	3	Tile	2	1	0	1	0.76	103.05	13559
18	3	Tile	2	1	0	0			
24	4	Tile	2	0	0	1	0.50	30.22	6043
32	5	Tile	2	0	0	1	0.50	36.19	7237
38	6	Tile	2	0	0	1	0.27	30.01	11115
38	6	Tile	2	1	0	0			
39	6	Tile	2	1	0	1			
39	6	Tile	2	1	0	1			
40	6	Tile	2	0	0	1			
45	7	Tile	2	0	0	1	0.50	26.11	5222
53	8	Tile	2	1	0	1	0.50	79.39	15878
53	8	Tile	2	1	0	1			
70	9	Tile	2	0	0	1	0.50	128.65	25729
71	9	Tile	2	0	0	1			
92	10	Tile	2	1	0	1	0.50	28.72	5744
101	11	Tile	2	1	1	1	0.50	60.26	12052
101	11	Tile	2	1	0	1			
111	12	Tile	2	1	0	1	0.50	26.34	5268
125	13	Tile	2	1	0	1	0.50	43.59	8718
134	14	Tile	2	1	0	1	0.50	41.19	8237
135	14	Tile	2	1	0	1			
136	15	Tile	2	1	0	1	0.50	56.66	11331
137	15	Tile	2	1	0	1			
137	15	Tile	2	1	0	1			
159	16	Tile	2	1	1	205.56	151.73	21938.92	14459
159	16	Tile	2	1	1	200.00			
159	16	Tile	2	1	1	49.64			
179	16	Tile	2	1	1	5.24			
195	17	Tile	2	1	1	4.78	12.34	598.92	4853
195	17	Tile	2	1	1	18.60			
196	17	Tile	2	1	1	13.64			
225	18	Tile	2	0	0	5.00	5.00	6.75	135
225	19	Tile	2	1	1	5.00	5.00	88.50	1770

Appendix 25B. Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for zero tillage, 1990

- 5

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
231	20	Tile	2	1	1	2.16	2.16	54.63	2531
250	21	Tile	2	0	0	0	10.16	2116.81	20840
250	21	Tile	2	1	1	12.06			
250	21	Tile	2	1	1	8.56			
250	21	Tile	2	1	1	12.06			
250	21	Tile	2	1	1	12.42			
251	21	Tile	2	1	1	5.70			
258	22	Tile	2	1	1	4.23	4.39	205.37	4674
258	22	Tile	2	1	1	7.33			
258	22	Tile	2	1	1	1.68			
258	22	Tile	2	1	1	4.34			
259	23	Tile	2	1	1	4.50	4.50	132.22	2936
262	24	Tile	2	1	1	2.10	3.34	99.22	2975
262	24	Tile	2	1	1	5.41			
262	24	Tile	2	1	1	1.77			
263	24	Tile	2	1	1	4.06			
263	24	Tile	2	0	0	0			
265	25	Tile	2	1	1	6.03	6.03	88.13	1462

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for ridge tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
4	1	Surface	1	1	1	1.09	1.15	134.43	11740.91
4	1	Surface	1	1	1	1.20			
10	2	Surface	1	1	1	1.73	1.73	105.08	6074.11
18	3	Surface	1	0	0	1.34	1.34	0.00	0.00
38	4	Surface	1	0	0	1.34	1.34	0.00	0.00
39	5	Surface	1	0	0	1.34	1.34	123.89	9245.32
39	5	Surface	1	1	0	1.34			
39	5	Surface	1	1	0	1.34			
53	6	Surface	1	1	0	1.34	0.80	146.79	18348.41
53	6	Surface	1	1	1	0.80			
58	7	Surface	1	0	0		0.00	0.00	0.00
101	8	Surface	1	1	0	0.88	0.88	34.85	3959.97
134	9	Surface	1	1	0	1.34	1.34	65.06	4855.41
136	10	Surface	1	1	0	1.34	1.34	90.14	6727.10
137	10	Surface	1	1	0	1.34			
137	11	Surface	1	1	0	1.34	1.34	50.51	3769.25
159	12	Surface	1	0	0		0.00	0.00	0.00
159	12	Surface	1	0	0				
195	13	Surface	1	1	0		0.00	0.00	0.00
225	14	Surface	1	1	0		0.00	0	0.00
231	15	Surface	1	0	1	0.07	0.07	3	4289.70
250	16	Surface	1	1	1	2.01	2.35	178	7590.22
250	16	Surface	1	1	1	2.68			
250	17	Surface	1	1	1	5.79	5.18	504	9720.52
250	17	Surface	1	1	1	4.58			
258	18	Surface	1	1	1	1.51	4.18	261	6238.98
258	18	Surface	1	1	1	4.20			
258	18	Surface	1	1	1	6.82			
259	19	Surface	1	1	1	2.82	2.82	177	6293.93
262	20	Surface	1	1	1	1.29	2.02	131	6468.49
262	20	Surface	1	1	1	3.06			
262	20	Surface	1	1	1	1.71			
265	21	Surface	1	1	1	8.28	5.72	71	1241.33
265	21	Surface	1	1	1	3.16			
4	1	Tile	1	0	0	0.98	1.64	10	624.00
10	2	Tile	1	1	1	2.30	2.30	114	4957.00
12	2	Tile	1	1	0	0.98			
18	3	Tile	1	1	1	0.27	0.32	42	13052.00
18	3	Tile	1	1	1	0.37			
24	4	Tile	1	0	0	0.98	0.98	53	5404.00

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
32	5	Tile	1	0	0	0.98	0.98	54	5532.00
38	6	Tile	1	0	0	0.98	0.65	77	11738.00
38	6	Tile	1	1	0	0.65			
39	6	Tile	1	1	0	0.98			
39	6	Tile	1	1	0	0.98			
40	6	Tile	1	0	0	0.98			
46	7	Tile	1	0	0	0.98	0.98	12	1255.00
53	8	Tile	1	1	0	0.98	0.98	263	26871.00
53	8	Tile	1	1	0	0.98			
71	9	Tile	1	0	0	0.98	0.98	198	20169.00
92	10	Tile	1	1	0	0.98	0.98	56	5723.00
101	11	Tile	1	1	0	0.98	0.98	136	13866.00
101	11	Tile	1	1	0	0.98			
111	12	Tile	1	1	0	0.98	0.98	41	4209.00
125	13	Tile	1	1	0	0.98	0.98	77	7829.00
134	14	Tile	1	1	0	0.98	0.98	97	9866.00
135	14	Tile	1	1	0	0.98			
136	15	Tile	1	1	0	0.98	0.33	48	14257.00
137	15	Tile	1	1	0	0.98			
137	15	Tile	1	1	1	0.33			
159	16	Tile	1	1	1	210.19	133.45	9522	7135.00
159	16	Tile	1	1	1	132.46			
159	16	Tile	1	1	1	57.69			
179	16	Tile	1	0	0				
195	17	Tile	1	1	1	3.07	3.23	29	902.00
195	17	Tile	1	1	1	4.20			
196	17	Tile	1	1	1	2.42			
225	18	Tile	1	0	0	6.36	6.36	0	0.00
225	19	Tile	1	1	1	6.36	6.36	63	990.00
231	20	Tile	1	1	1	2.07	2.07	51	2472.00
250	21	Tile	1	0	0		3.76	606	16113.00
250	2	Tile	1	1	1	4.43			
250	21	Tile	1	1	1	5.37			
250	21	Tile	1	1	1	3.73			
250	21	Tile	1	1	1	2.68			
251	21	Tile	1	1	1	2.58			
258	22	Tile	1	1	1	1.34	2.32	189	8152.00
258	22	Tile	1	1	1	2.53			
258	22	Tile	1	1	1	3.31			
258	22	Tile	1	1	1	2.10			

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
259	23	Tile	1	1	1	1.99	1.99	105	5274.00
262	24	Tile	1	1	1	1.40	1.76	85	4834.00
262	24	Tile	1	1	1	2.63			
262	24	Tile	1	1	1	1.77			
263	24	Tile	1	1	1	1.40			
263	24	Tile	1	1	1	1.58			
265	25	Tile	1	1	1	1.77	1.77	37	2084.00
4	1	Surface	2	1	1		0.00	0	15733.21
4	1	Surface	2	1	1				
10	2	Surface	2	1	1	0.65	0.65	42	6491.12
18	3	Surface	2	1	1	2.23	2.23	66	2941.69
38	4	Surface	2	1	0	0.72	0.72	29	4021.39
39	5	Surface	2	1	0	0.72	0.72	26	3620.55
39	5	Surface	2	0	0	0.72			
39	5	Surface	2	1	0	0.72			
53	6	Surface	2	1	0	0.72	0.72	140	19466.90
53	6	Surface	2	1	1	0.72			
58	7	Surface	2	0	0	0.72	0.72	0	0.00
101	8	Surface	2	1	1	0.72	0.72	38	5343.54
134	9	Surface	2	1	0	0.72	0.72	47	6533.15
136	10	Surface	2	1	0	0.72	0.72	44	6109.67
137	10	Surface	2	1	0	0.72			
137	11	Surface	2	1	0	0.72	0.72	30	4144.23
159	12	Surface	2	1	1	396.34	427.34	12087	2828.55
159	12	Surface	2	1	1	458.33			
195	13	Surface	2	1	1	44.58	44.58	582	1305.98
225	14	Surface	2	1	1	11.00	11.00	209	1900.79
231	15	Surface	2	1	1	0.08	0.08	4	5094.62
250	16	Surface	2	1	1	4.43	6.49	351	5398.49
250	16	Surface	2	1	1	8.56			
250	17	Surface	2	1	1	5.70	11.67	707	6061.18
250	17	Surface	2	1	1	17.65			
258	18	Surface	2	1	1	2.89	5.11	415	8126.83
258	18	Surface	2	1	1	7.15			
258	18	Surface	2	1	1	5.30			
259	19	Surface	2	1	1	2.18	2.18	138	6345.65
262	20	Surface	2	1	1	2.26	2.54	228	8967.32
262	20	Surface	2	1	1	1.94			
262	20	Surface	2	1	1	3.42			
265	21	Surface	2	1	1	3.13	4.31	116	2683.08

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
265	21	Surface	2	1	1	5.49			
4	1	Tile	2	0	0	0.56	0.56	0	0.00
10	2	Tile	2	1	1	0.49	0.53	18	3381.00
12	2	Tile	2	1	0	0.56			
18	3	Tile	2	1	1	0.98	0.81	111	13714.00
18	3	Tile	2	1	1	0.64			
24	4	Tile	2	1	0	0.56	0.56	33	5813.00
32	5	Tile	2	1	0	0.56	0.56	39	7033.00
38	6	Tile	2	0	0	0.56	0.25	33	13331.00
38	6	Tile	2	1	1	0.25			
39	6	Tile	2	1	0	0.56			
39	6	Tile	2	1	0	0.56			
40	6	Tile	2	0	0	0.56			
46	7	Tile	2	1	0	0.56	0.56	18	3303.00
53	8	Tile	2	1	0	0.56	0.56	117	20929.00
53	8	Tile	2	1	0	0.56			
71	9	Tile	2	0	0	0.56	0.56	150	26822.00
92	10	Tile	2	1	0	0.56	0.56	33	5936.00
101	11	Tile	2	1	0	0.56	0.56	59	10529.00
101	11	Tile	2	1	0	0.56			
111	12	Tile	2	1	0	0.56	0.56	28	5061.00
125	13	Tile	2	1	0	0.56	0.56	40	7163.00
134	14	Tile	2	1	0	0.56	0.56	29	5144.00
135	14	Tile	2	1	0	0.56			
136	15	Tile	2	1	0	0.56	0.56	48	8562.00
137	15	Tile	2	1	0	0.56			
137	15	Tile	2	1	0				
159	16	Tile	2	1	1	262.22	128.26	19605	15285.00
159	16	Tile	2	1	1	162.50			
159	16	Tile	2	1	1	82.68			
179	16	Tile	2	1	1	5.65			
195	17	Tile	2	1	1	1.75	7.65	527	6879.00
195	17	Tile	2	1	1	11.36			
196	17	Tile	2	1	1	9.85			
225	18	1.	2	0	0	5.90	5.90	0	0.00
225	19	Tile	2	1	1	5.90	5.90	52	881.00
231	20	Tile	2	1	1	2.59	2.59	75	2874.00
250	21	Tile	2	0	0		7.79	1100	14125.00
250	21	Tile	2	1	1	7.09			
250	21	Tile	2	1	1	6.04			

Appendix 26B. Metolachlor samples taken and analyzed, concentrations, event concentrations and losses per hectare for ridge tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
250	21	Tile	2	1	1	4.41			
250	21	Tile	2	1	1	15.69			
251	21	Tile	2	1	1	5.70			
258	22	Tile	2	1	1	1.68	5.25	212	4041.00
258	22	Tile	2	1	1	5.33			
258	22	Tile	2	1	1	7.13			
258	22	Tile	2	1	1	6.85			
259	23	Tile	2	1	1	2.52	2.52	82	3265.00
262	24	Tile	2	1	1	3.08	3.29	99	3002.00
262	24	Tile	2	1	1	4.66			
262	24	Tile	2	1	1	5.32			
263	24	Tile	2	1	1	3.15			
263	24	Tile	2	0	0	0.25			
265	25	Tile	2	1	1	2.20	2.20	27	1236.00

Appendix 27B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1990

- 1

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
4	1	Surface	1	1	1	0.50	1.60	220.28	13767.77
4	1	Surface	1	1	1	2.70		0.00	
10	2	Surface	1	0	0	0.00	0.00	0.00	0.00
18	3	Surface	1	0	0	0.00	0.00	0.00	0.00
38	4	Surface	1	0	0	0.00	0.00	0.00	0.00
39	5	Surface	1	0	0	0.00	0.00	0.00	0.00
39	5	Surface	1	0	0	1.35		0.00	
39	5	Surface	1	0	0	1.35		0.00	
53	6	Surface	1	1	0	1.35	1.35	307.58	22783.58
53	6	Surface	1	1	0	1.35		0.00	
58	7	Surface	1	0	0	1.35	1.35	71.05	5262.72
101	8	Surface	1	0	0	0.00	0.00	0.00	0.00
134	9	Surface	1	0	0	0.00	0.00	0.00	0.00
136	10	Surface	1	0	0	0.00	0.00	0.00	0.00
137	10	Surface	1	0	0	0.00		0.00	
137	11	Surface	1	0	0	0.00	0.00	0.00	0.00
159	12	Surface	1	1	1	289.37	289.37	6435.74	2224.05
159	12	Surface	1	0	0	0.00		0.00	
195	13	Surface	1	1	0	0.00	0.00	0.00	0.00
225	14	Surface	1	1	0	0.00	0.00	0.00	0.00
231	15	Surface	1	0	0	0.00	0.00	0.00	0.00
250	16	Surface	1	1	1	12.77	16.95	865.36	5104.32
250	16	Surface	1	1	1	21.14		0.00	
250	17	Surface	1	1	1	22.78	22.78	1393.55	6116.14
250	17	Surface	1	0	0	0.00		0.00	
258	18	Surface	1	1	1	4.23	11.04	516.55	4677.62
258	18	Surface	1	1	1	14.00		0.00	
258	18	Surface	1	1	1	14.90		0.00	
259	19	Surface	1	1	1	8.56	8.56	364.03	4254.14
262	20	Surface	1	1	1	3.87	6.75	297.75	4412.54
262	20	Surface	1	1	1	7.95		0.00	
262	20	Surface	1	1	1	8.42		0.00	
265	21	Surface	1	0	0	0.00	0.00	0.00	0.00
265	21	Surface	1	0	0	0.00		0.00	
4	1	1.	1	0	0	0.03	0.03	0.16	525.00
10	2	Tile	1	1	1	0.03	0.03	1.16	3858.00
12	2	Tile	1	1	0	0.81		0.00	
18	3	Tile	1	1	1	0.98	1.46	369.16	25372.00
18	3	Tile	1	1	1	1.93		0.00	
24	4	Tile	1	1	0	0.81	0.81	77.44	9560.00

Appendix 27B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1990

- 2

Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
32	5	Tile	1	1	0	0.81	0.81	89.44	11042.00
38	6	Tile	1	0	0	0.81	0.81	141.09	17419.00
38	6	Tile	1	1	1	0.81		0.00	
39	6	Tile	1	1	0	0.81		0.00	
39	6	Tile	1	1	0	0.81		0.00	
40	6	Tile	1	1	0	0.81		0.00	
46	7	Tile	1	1	0	0.81	0.81	30.08	3714.00
53	8	Tile	1	1	0	0.81	0.81	315.75	38982.00
53	8	Tile	1	1	0	0.81		0.00	
71	9	Tile	1	1	0	0.81	0.81	291.29	35962.00
92	10	Tile	1	1	0	0.81	0.81	55.02	6792.00
101	11	Tile	1	1	0	0.81	0.81	184.98	22835.00
101	11	Tile	1	1	0	0.81		0.00	
111	12	Tile	1	1	0	0.81	0.81	57.54	7104.00
125	13	Tile	1	1	0	0.81	0.81	101.20	12494.00
134	14	Tile	1	1	0	0.81	0.81	145.35	17945.00
135	14	Tile	1	1	0	0.81		0.00	
136	15	Tile	1	1	0	0.81	0.83	279.83	33715.00
137	15	Tile	1	1	0	0.81		0.00	
137	15	Tile	1	1	1	0.83		0.00	
159	16	Tile	1	1	1	91.90	60.12	2128.21	3540.00
159	16	Tile	1	1	1	60.00		0.00	
159	16	Tile	1	1	1	28.46		0.00	
179	16	Tile	1	0	0	0.00		0.00	
195	17	Tile	1	1	1	17.44	9.69	265.92	2743.00
195	17	Tile	1	1	1	5.58		0.00	
196	17	Tile	1	1	1	6.06		0.00	
225	18	Tile	1	1	1	10.00	10.00	10.90	109.00
225	19	Tile	1	1	1	10.00	10.00	118.70	1187.00
231	20	Tile	1	1	1	2.07	2.07	58.51	2828.00
250	21	Tile	1	1	1	0.55	7.35	2523.86	34342.00
250	21	Tile	1	1	1	11.35		0.00	
250	21	Tile	1	1	1	10.37		0.00	
250	21	Tile	1	1	1	10.59		0.00	
250	21	Tile	1	1	1	9.31		0.00	
251	21	Tile	1	1	1	6.17		0.00	
258	22	Tile	1	1	1	3.02	6.09	880.78	14459.00
258	22	Tile	1	1	1	7.50		0.00	
258	22	Tile	1	1	1	8.25		0.00	
258	22	Tile	1	1	1	5.59		0.00	

Appendix 27B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
259	23	Tile	1	1	1	2.98	2.98	356.22	11953.00
262	24	Tile	1	1	1	2.10	4.48	472.46	10541.00
262	24	Tile	1	1	1	5.64		0.00	
262	24	Tile	1	1	1	5.32		0.00	
263	24	Tile	1	1	1	5.24		0.00	
263	24	Tile	1	1	1	4.11		0.00	
265	25	Tile	1	1	1	2.23	2.23	105.69	4731.00
4	1	Surface	2	1	1	3.12	1.56	240.34	15406.71
4	1	Surface	2	0	0	0.00		0.00	
10	2	Surface	2	1	1	0.00	0.00	0.00	0.00
18	3	Surface	2	1	1	7.13	7.13	156.96	2201.42
38	4	Surface	2	1	0	3.42	3.42	80.48	2353.35
39	5	Surface	2	0	0	3.42	3.42	68.88	2013.93
39	5	Surface	2	1	0	3.42		0.00	
39	5	Surface	2	1	0	3.42		0.00	
53	6	Surface	2	1	1	3.42	0.80	178.05	22256.66
53	6	Surface	2	0	0	0.80		0.00	
58	7	Surface	2	1	1	0.00	0.00	0.00	0.00
101	8	Surface	2	1	0	2.00	2.00	77.91	3895.32
134	9	Surface	2	1	0	3.42	3.42	203.31	5944.81
136	10	Surface	2	1	0	3.42	3.42	202.65	5925.41
137	10	Surface	2	1	0	3.42		0.00	
137	11	Surface	2	1	1	1.00	1.00	33.59	3358.70
159	12	Surface	2	1	1	435.48	435.48	4012.11	921.30
159	12	Surface	2	1	0	0.00		0.00	
195	13	Surface	2	1	0	0.00	0.00	0.00	0.00
225	14	Surface	2	1	1	0.00	0.00	0.00	0.00
231	15	Surface	2	1	1	0.15	0.15	4.03	2721.87
250	16	Surface	2	1	1	12.77	16.79	880.13	5243.33
250	16	Surface	2	1	1	20.81		0.00	
250	17	Surface	2	1	1	23.73	20.53	1191.11	5802.57
250	17	Surface	2	1	1	17.32		0.00	
258	18	Surface	2	1	1	7.85	9.70	504.33	5201.30
258	18	Surface	2	1	1	6.67		0.00	
258	18	Surface	2	1	1	14.57		0.00	
259	19	Surface	2	1	1	7.95	7.95	527.55	6633.36
262	20	Surface	2	1	1	3.23	3.95	219.64	5556.89
262	20	Surface	2	1	1	6.27		0.00	
262	20	Surface	2	1	1	2.36		0.00	
265	21	Surface	2	1	1	2.24	2.13	42.37	1984.83

Appendix 27B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
265	21	Surface	2	0	0	2.03		0.00	
4	1	Tile	2	1	1	1.83	1.83	13.36	730.00
10	2	Tile	2	1	0	0.17	0.17	7.65	4501.00
12	2	Tile	2	1	1	1.83		0.00	
18	3	Tile	2	1	1	1.19	3.09	470.65	15256.00
18	3	Tile	2	1	0	4.98		0.00	
24	4	Tile	2	1	0	1.83	1.83	162.06	8857.00
32	5	Tile	2	0	0	1.83	1.83	140.29	7666.00
38	6	Tile	2	1	0	1.83	1.83	335.53	18335.00
38	6	Tile	2	1	0	1.83		0.00	
39	6	Tile	2	1	0	1.83		0.00	
39	6	Tile	2	1	0	1.83		0.00	
40	6	Tile	2	1	0	1.83		0.00	
46	7	Tile	2	1	0	1.83	1.83	138.17	7550.00
53	8	Tile	2	1	0	1.83	1.83	283.60	15497.00
53	8	Tile	2	1	0	1.83		0.00	
71	9	Tile	2	1	0	1.83	1.83	487.51	26640.00
92	10	Tile	2	1	0	1.83	1.83	83.63	4570.00
101	11	Tile	2	1	0	1.83	1.83	188.75	10314.00
101	11	Tile	2	1	0	1.83		0.00	
111	12	Tile	2	1	0	1.83	1.83	79.40	4339.00
125	13	Tile	2	1	0	1.83	1.83	131.30	7175.00
134	14	Tile	2	1	0	1.83	1.83	150.99	8251.00
135	14	Tile	2	1	0	1.83		0.00	
136	15	Tile	2	1	0	1.83	1.00	158.79	15879.00
137	15	Tile	2	1	1	1.83		0.00	
137	15	Tile	2	1	1	1.00		0.00	
159	16	Tile	2	1	1	6.67	28.88	1199.65	4154.00
159	16	Tile	2	1	1	26.40		0.00	
159	16	Tile	2	0	0	53.57		0.00	
179	16	Tile	2	1	1	0.00		0.00	
195	17	Tile	2	1	1	25.00	13.83	505.22	3653.00
195	17	Tile	2	1	1	5.58		0.00	
196	17	Tile	2	1	1	10.91		0.00	
225	18	Tile	2	1	1	3.36	3.36	8.78	261.00
225	19	Tile	2	1	1	3.36	3.36	77.46	2303.00
231	20	Tile	2	1	1	2.07	2.07	65.40	3161.00
250	21	Tile	2	1	1	2.00	8.98	2365.05	26348.00
250	21	Tile	2	1	1	15.89		0.00	
250	21	Tile	2	1	1	4.70		0.00	

Appendix 27B.

Metolachlor samples taken and analyzed, concentrations, event concentrations
and losses per hectare for conventional tillage, 1990

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Julian Time/90	Event #	Source	Rep	Taken #	Analyzed #	Metol. Conc., ug/L	Event Metol. Conc., ug/L	Event loss, Metol., mg/ha	Event Volume, L/plot
250	21	Tile	2	1	1	22.79		0.00	
250	21	Tile	2	1	1	3.92		0.00	
251	21	Tile	2	1	1	4.56		0.00	
258	22	Tile	2	1	1	6.54	10.04	591.25	5887.00
258	22	Tile	2	1	1	13.00		0.00	
258	22	Tile	2	1	1	7.34		0.00	
258	22	Tile	2	1	1	13.29		0.00	
259	23	Tile	2	1	1	4.27	4.27	160.31	3753.00
262	24	Tile	2	1	1	4.72	9.39	364.92	3887.00
262	24	Tile	2	1	1	9.02		0.00	
262	24	Tile	2	1	1	11.17		0.00	
263	24	Tile	2	1	1	12.06		0.00	
263	24	Tile	2	1	1	9.97		0.00	
265	25	Tile	2	1	1	7.77	7.77	197.80	2547.00